

A modern office interior with large arched windows, green chairs, and people working. The scene is bright and airy, with natural light streaming in from the windows. Several people are working at long tables, some using laptops. A woman in a blue dress is standing and looking at a tablet, while a man in a light blue shirt sits next to her, also looking at a laptop. In the background, a man in a blue shirt is standing near a window, and another man in a brown jacket is sitting on the right side of the frame. There are potted plants and a wooden storage unit in the background.

OneDrive Known Folder Move (KFM) Workshop

Scope of this deck

Scope

Provide guidance on how you can **roll out OneDrive KFM**:

Deploy OneDrive client and log installation

Define OneDrive policy to enable KFM

Check compliance on managed devices and remediate KFM settings

Report on OneDrive deployment and configuration

Out of Scope

The following topics are **outside** the focus of this presentation:

Setting up core infrastructure (AD, DNS, AD Connect, SCCM)

Third-party tools and/or custom applications integration

Agenda

What we'll cover



1. Pre-requisites



2. Plan for Scenarios



3. Deployment



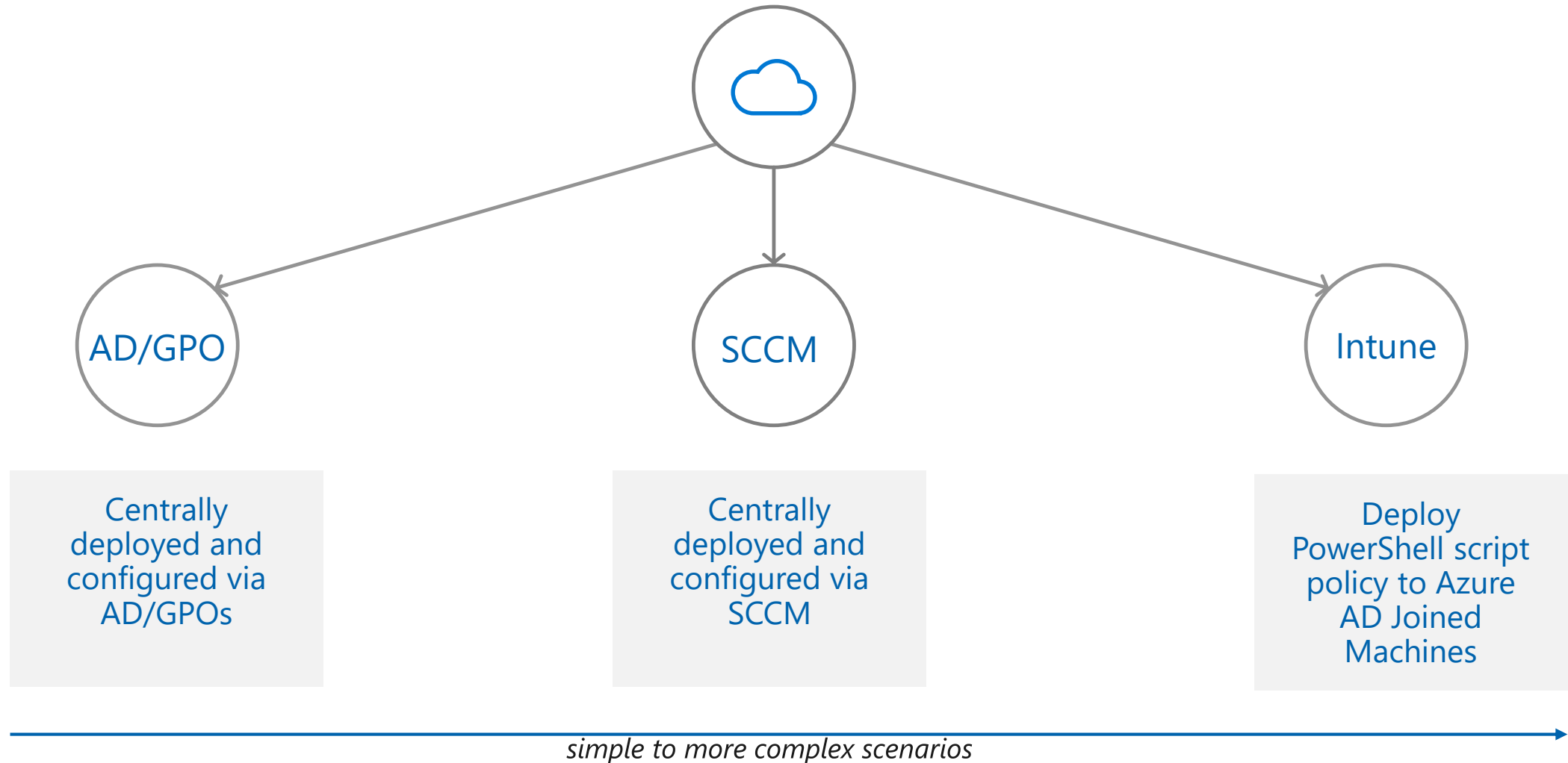
4. Report and monitor



Keep your files protected
and backed up using KFM

Ways to Deploy

Choose the simplest option based on your requirements



Plan for common challenges

Limited Network Bandwidth

Assess the number of users and computers per user to which you'll deploy the sync client.

[Assess the available bandwidth and network conditions.](#)

[Measure the network utilization of the sync client for a pilot group.](#)

When you deploy, [control the sync throughput](#) and [limit sync upload rate](#).

Roll out gradually and monitor other potential

OneNote and/or PST in known folders

Proactively report which users have OneNote files or .PST files in their known folders, OR

Reactively engage with those users if it fails for them to move those files elsewhere, e.g. [OneNote](#)

OneNote migration with KFM – [In development](#)

Require other known folders like Favorites, Videos, etc.

For other known folders like Favorites and Videos, please use [Folder Redirection with Offline Files](#) . Keep in mind KFM won't work if you have previously used Folder Redirection on Desktop, Pictures, or Documents.

Plan for common challenges continued

Large Mac Device population

Upvote the following [user voice regarding Mac + KFM](#).

Limited storage on machines

Deploy using [Files on Demand](#).

VDI environment

[Only persistent desktop environments](#) are supported at this time

Windows Virtual Desktop provides new Windows 10 Multi-User (EVD) OS with Office, OneDrive Files On-Demand (per machine), Microsoft Teams and more – [in development](#).



Deploy KFM using Active Directory + GPOs

Option 1

OneDrive KFM GPO

Use Group Policy Management console

Add OneDrive ADM files to central store

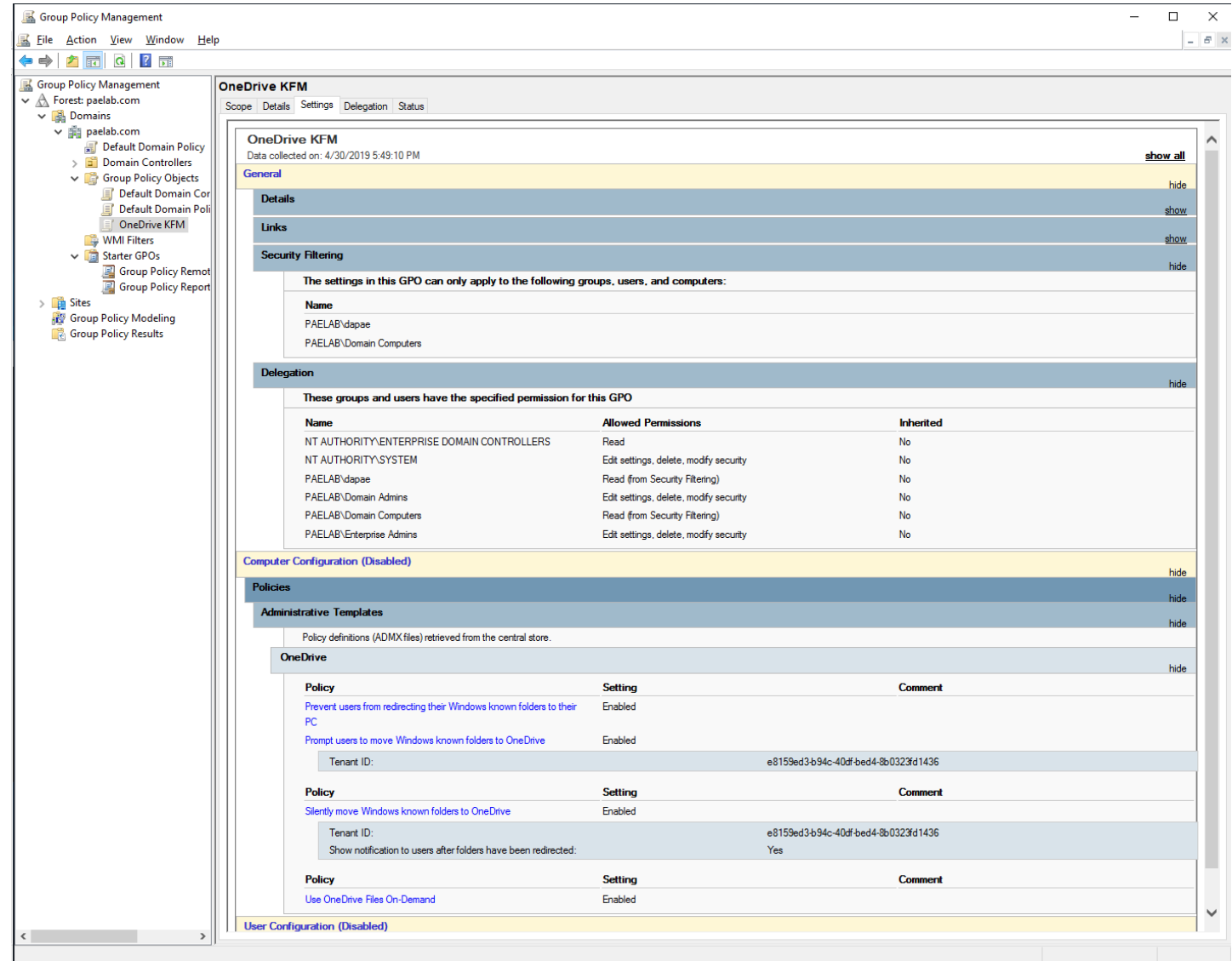
Configure OneDrive GPO settings

Specify subset of users or computers for OneDrive KFM GPOs using security filtering

Link GPO to a new or existing OU

Evaluate the deployment and make policy adjustments

Add next wave of objects to security group used in GPO security filtering



Key GPOs when first deploying KFM

| Registry Key | Description | Enabling this policy |
|------------------------------------|--|--|
| KFMOptInWithWizard | Prompt users to move Windows known folders to OneDrive | [HKLM\SOFTWARE\Policies\Microsoft\OneDrive]"KFMOptInWithWizard"="Tenant ID" |
| KFMBlockOptOut | Prevent users from redirecting their Windows known folders to their PC. Enable to disable the "Stop protecting" button. | [HKLM\SOFTWARE\Policies\Microsoft\OneDrive]"KFMBlockOptOut"="dword:00000001" |
| KFMSilentOptIn | Silently move Windows known folders to OneDrive. Use this setting to redirect your users' Documents, Pictures, and Desktop folders to OneDrive without any user interaction. | [HKLM\SOFTWARE\Policies\Microsoft\OneDrive]"KFMSilentOptIn"="Tenant ID" |
| KFMSilentOptInWithNotification | Notify user after successful folder redirection. | [HKLM\SOFTWARE\Policies\Microsoft\OneDrive]"KFMSilentOptInWithNotification" = "dword:00000001" |
| AutomaticUploadBandwidthPercentage | Limit the sync client upload rate to a percentage of throughput. Recommend setting when enabling KFMSilentOptIn or KFMOptInWithWizardsilently. | [HKLM\SOFTWARE\Policies\Microsoft\OneDrive]"AutomaticUploadBandwidthPercentage"="dword:00000032" Hexadecimal 32 = Decimal 50 or 50% of throughput |
| FilesOnDemandEnabled (optional) | Use OneDrive Files On-Demand. This setting lets you control whether OneDrive Files On-Demand is enabled for your organization. | [HKLM\SOFTWARE\Policies\Microsoft\OneDrive]"FilesOnDemandEnabled"="dword:00000001" |

Visit <https://docs.microsoft.com/en-us/onedrive/use-group-policy> for entire list of OneDrive sync client settings



Monitor with PowerShell

Script will check:

Know Folder Move (KFM) eligibility (for whatever device it was run on)

Payload details (number of items and size of content within known folders)

KFM status (have the known folders been moved to OneDrive)

KFM GPO state (what GPOs have been set)

<https://aka.ms/kfmStatus>

alland_WIN10X64 - Notepad

File Edit Format View Help

True | Device_is_KFM_GPO_eligible

True | Desktop_is_in_OneDrive

True | Documents_is_in_OneDrive

True | Pictures_is_in_OneDrive

False | KFM_Opt_In_Wizard_Set

True | KFM_Silent_Opt_In_Set

True | KFM_Silent_With_Notification_Set

False | KFM_Block_Opt_In_Set

False | KFM_Block_Opt_Out_Set

19.043.0304.0007 | OneDrive Sync client version



Deploy KFM using SCCM

Option 2



Pre-requisites

OneDrive users licensed and [sites provisioned](#)

Sync Client Version
18.111.0603.0004 or later

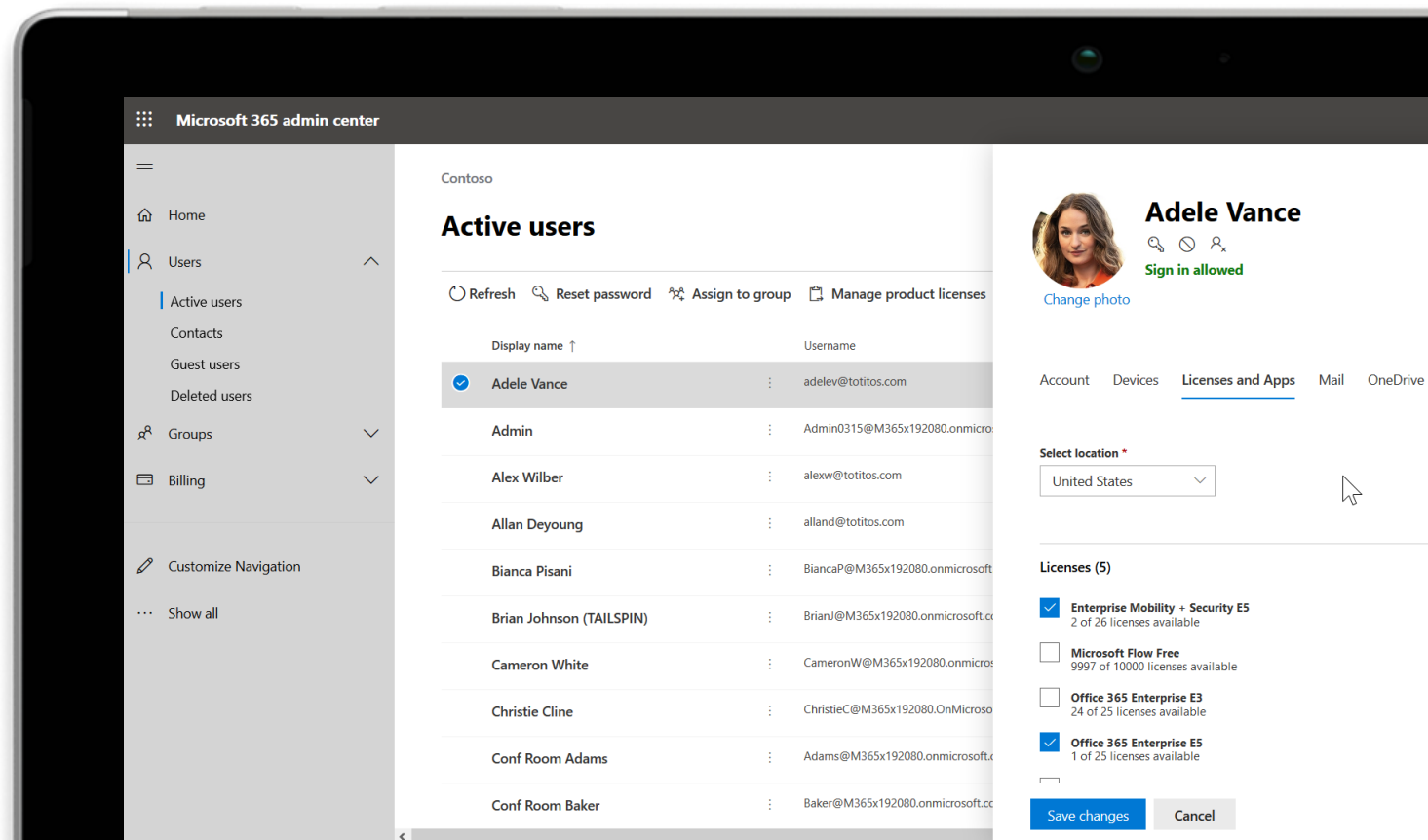
O365 Admin Portal Access

System Center Configuration Manager (current) is setup and ready to deploy apps and configurations

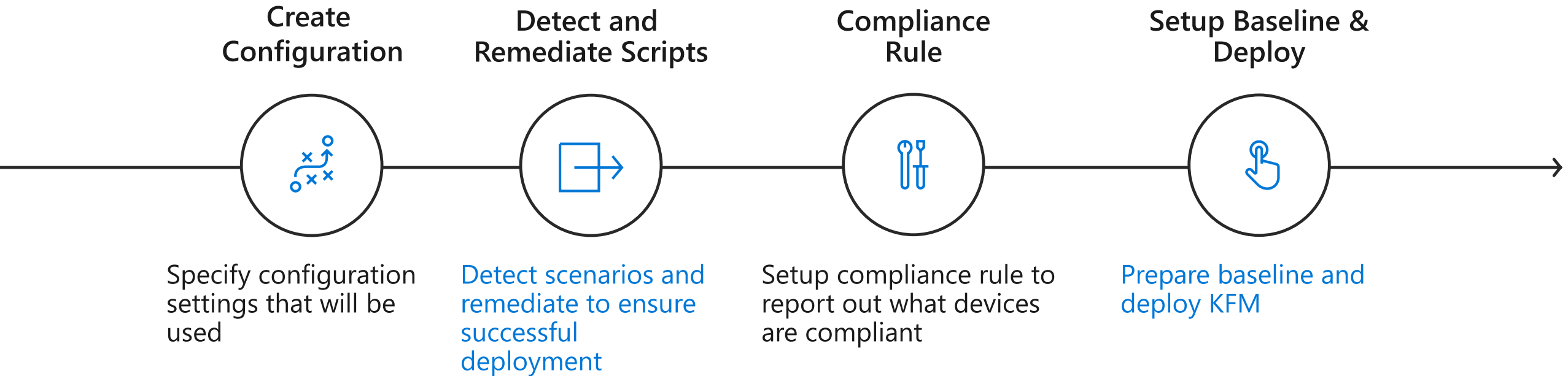
PowerShell scripts can run on Windows devices

Network team included in bandwidth conversations

SSCM Build 1902 introduces a OneDrive for Business profile to setup a compliance policy



Deploy KFM via SCCM



<https://docs.microsoft.com/OneDrive>



Create a Configuration Item (CI)

CI contains detection, remediation and compliance rules. For OneDrive:

Specify the Windows OS version

Script to detect the OneDrive registry key

Script a remediation steps to add OneDrive KFM registry keys/values

Use a compliance rule to remediate the OneDrive KFM policy

The screenshot shows the 'OneDrive Known Folder Move Properties' dialog box. The 'General' tab is selected, displaying the following information:

- Name:** OneDrive Known Folder Move
- Description:** CI for OneDrive Known Folder Move
- Revision:** 8
- Type:** Operating System
- Relationships:** Yes
- Date modified:** 4/24/2019 4:13 PM
- Modified by:** PAELAB\dapae

At the bottom, there is a section for 'Assigned categories to improve searching and filtering:' with an empty text box and a 'Categories...' button. The 'OK', 'Cancel', and 'Apply' buttons are at the bottom right.



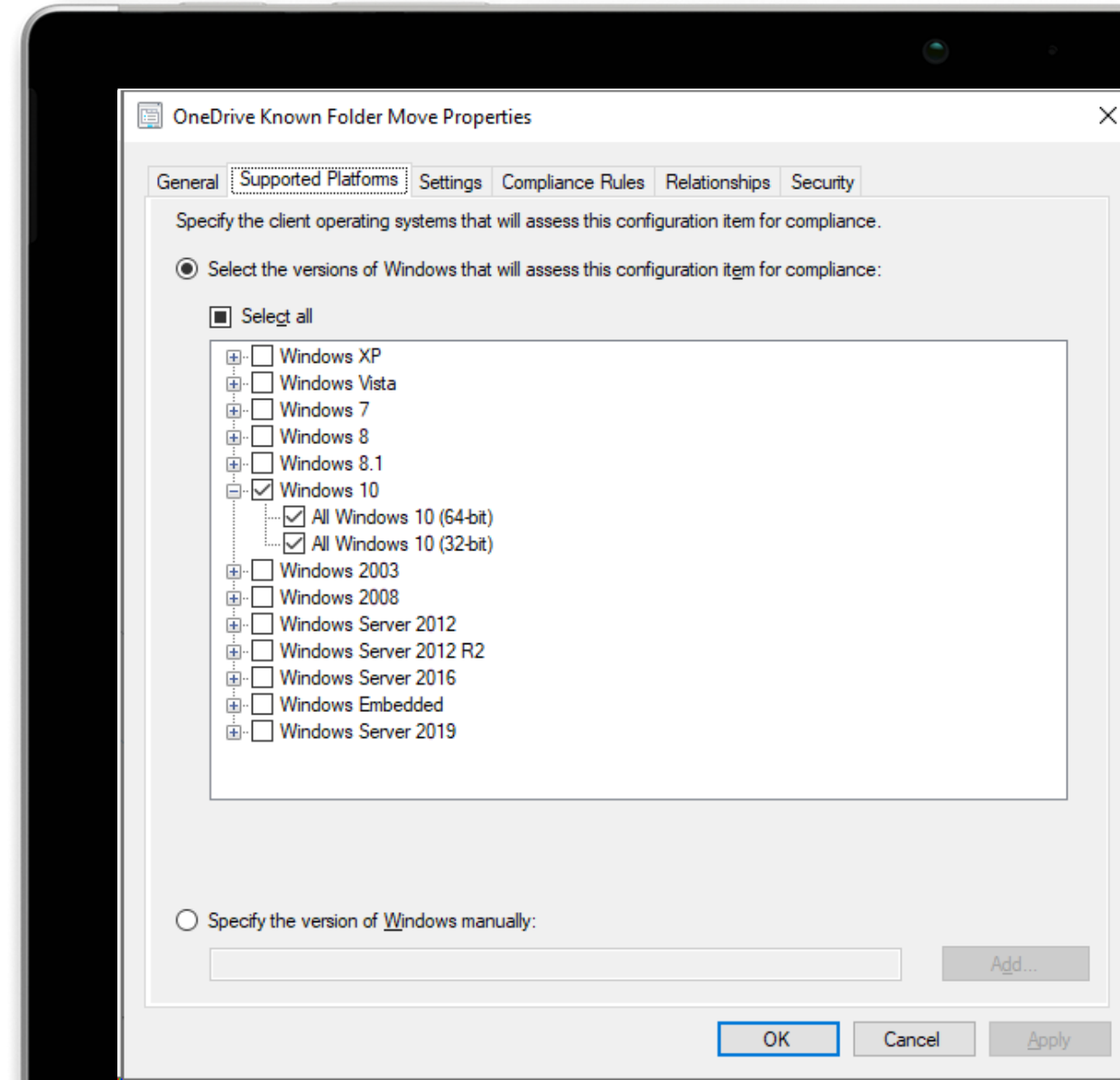
Supported Platforms

Known Folder Move works with:

Windows 7

Windows 8/8.1

Windows 10





Settings – Discovery Script

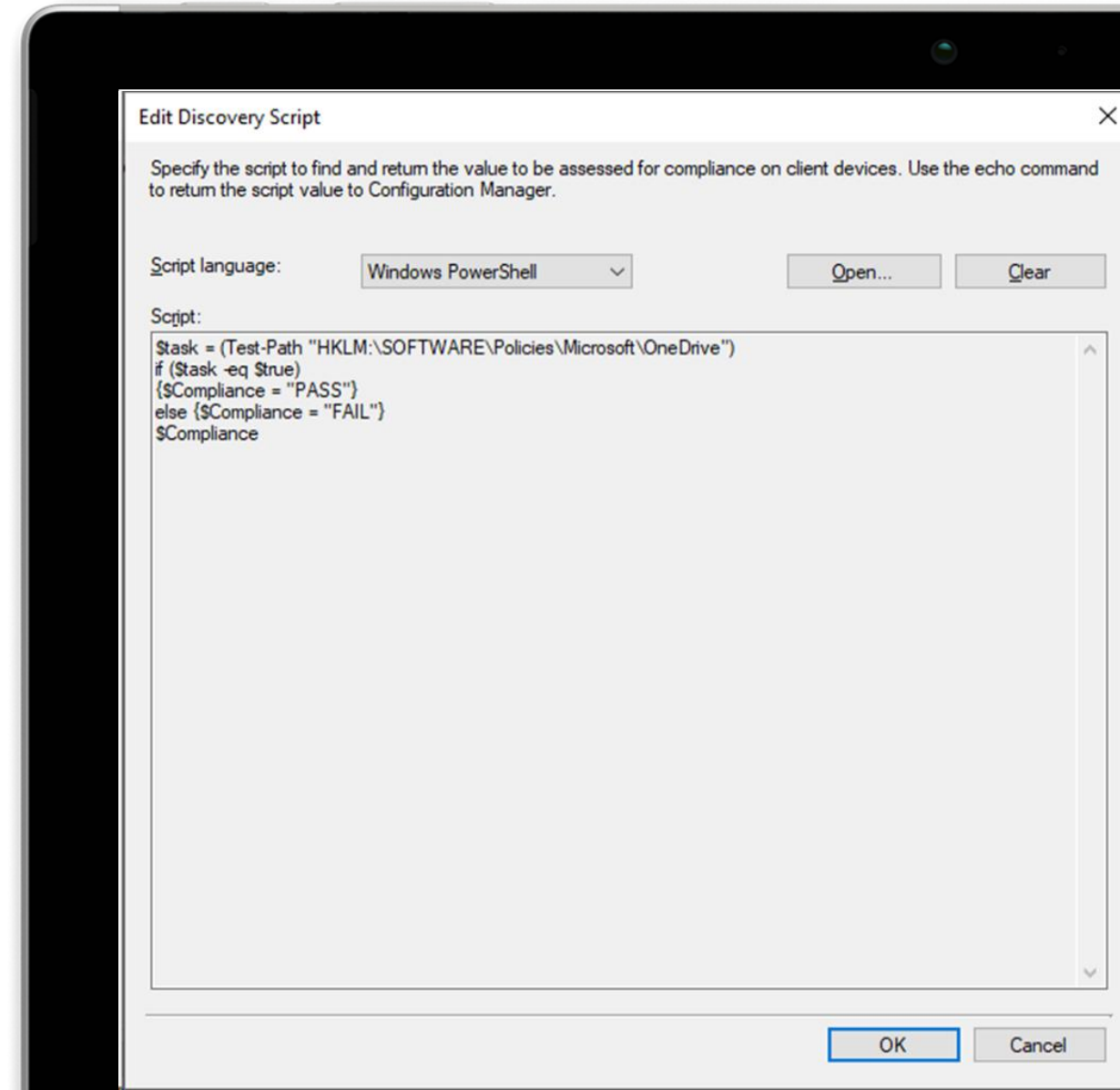
Test for OneDrive registry key

Assign PASS if key exists

Else send FAIL value to compliance rule

Simple to extend to evaluate more

```
$task = (Test-Path
"HKLM:\SOFTWARE\Policies\Microsoft\OneDrive")
If($task -eq $true){
$Compliance = "PASS"
}
Else{
$Compliance = "FAIL"
}
$Compliance
```





Settings – Remediation Script

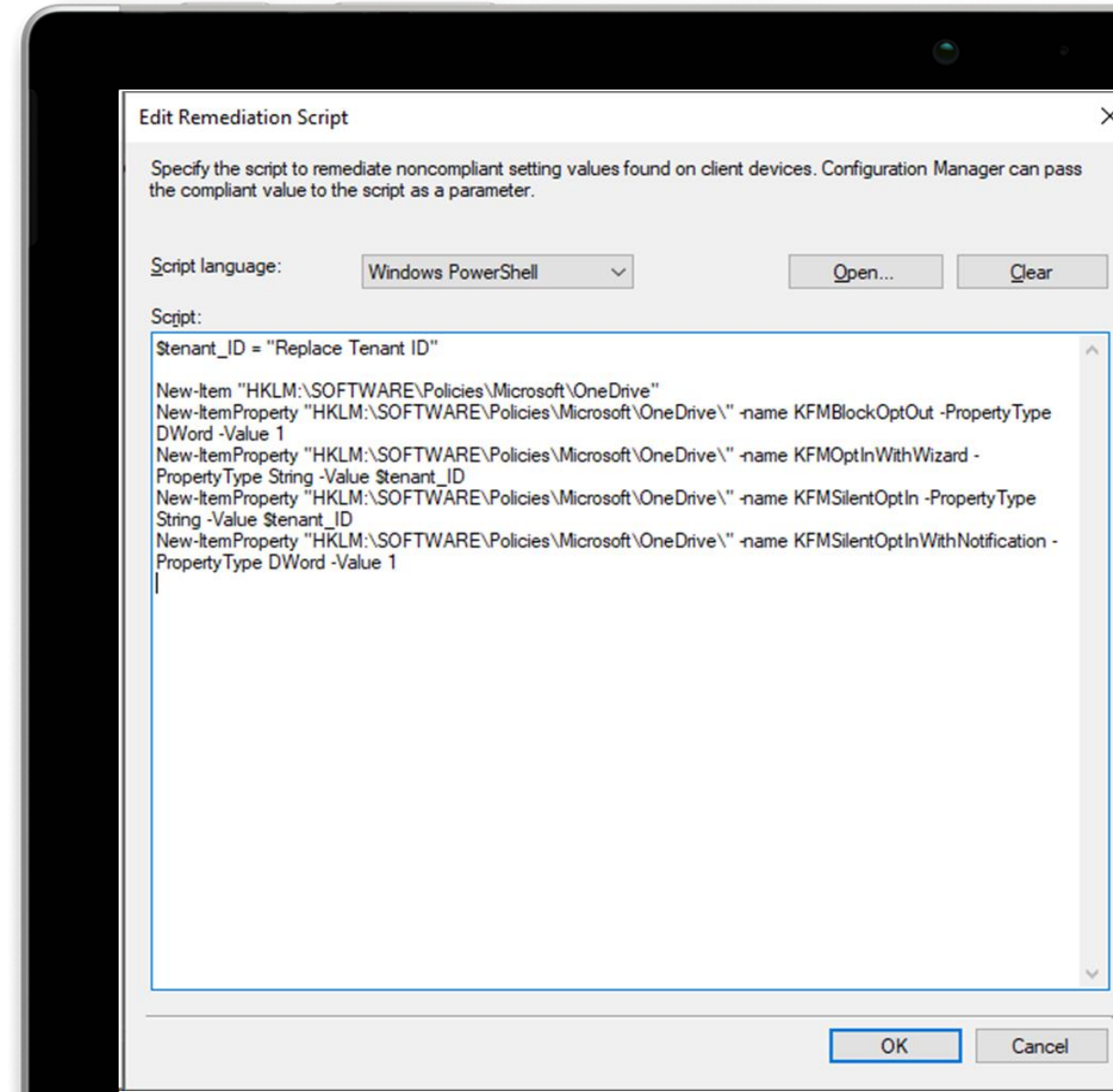
Script exactly which OneDrive KFM policies to deploy

Enforce users to keep known folders directed to OneDrive

Prompt users to move Windows known folders

Silently move known folders and notify when redirection is successful

```
$tenant_ID = "Replace Tenant ID"
New-Item "HKLM:\SOFTWARE\Policies\Microsoft\OneDrive"
New-ItemProperty "HKLM:\SOFTWARE\Policies\Microsoft\OneDrive\" -name
KFMBlockOptOut -PropertyType DWord -Value 1
New-ItemProperty "HKLM:\SOFTWARE\Policies\Microsoft\OneDrive\" -name
KFMOptInWithWizard -PropertyType String -Value $tenant_ID
New-ItemProperty "HKLM:\SOFTWARE\Policies\Microsoft\OneDrive\" -name
KFMSilentOptIn -PropertyType String -Value $tenant_ID
New-ItemProperty "HKLM:\SOFTWARE\Policies\Microsoft\OneDrive\" -name
KFMSilentOptInWithNotification -PropertyType DWord -Value 1
```





Compliance Rules

Detection value passed to rule

PASS = no remediation script

FAIL = remediation script adds
OneDrive registry key/values to non-
compliant device

Must check "Run the specified
remediation script..."

Enable Report noncompliance and set
sev reports

Edit Rule

Specify rules to define compliance conditions for this setting

Name: OneDrive KFM Key Check

Description: Check for OneDrive registry key. Run remediation script if it does not exist.

Selected setting: OneDrive Known Folder Move \ OneDrive KFI Browse... Properties...

Rule type: Value

The setting must comply with the following rule:

The value returned by the specified script: Equals

the following values: PASS

☒ Run the specified remediation script when this setting is noncompliant

☒ Report noncompliance if this setting instance is not found

Noncompliance severity for reports: Information

OK Cancel

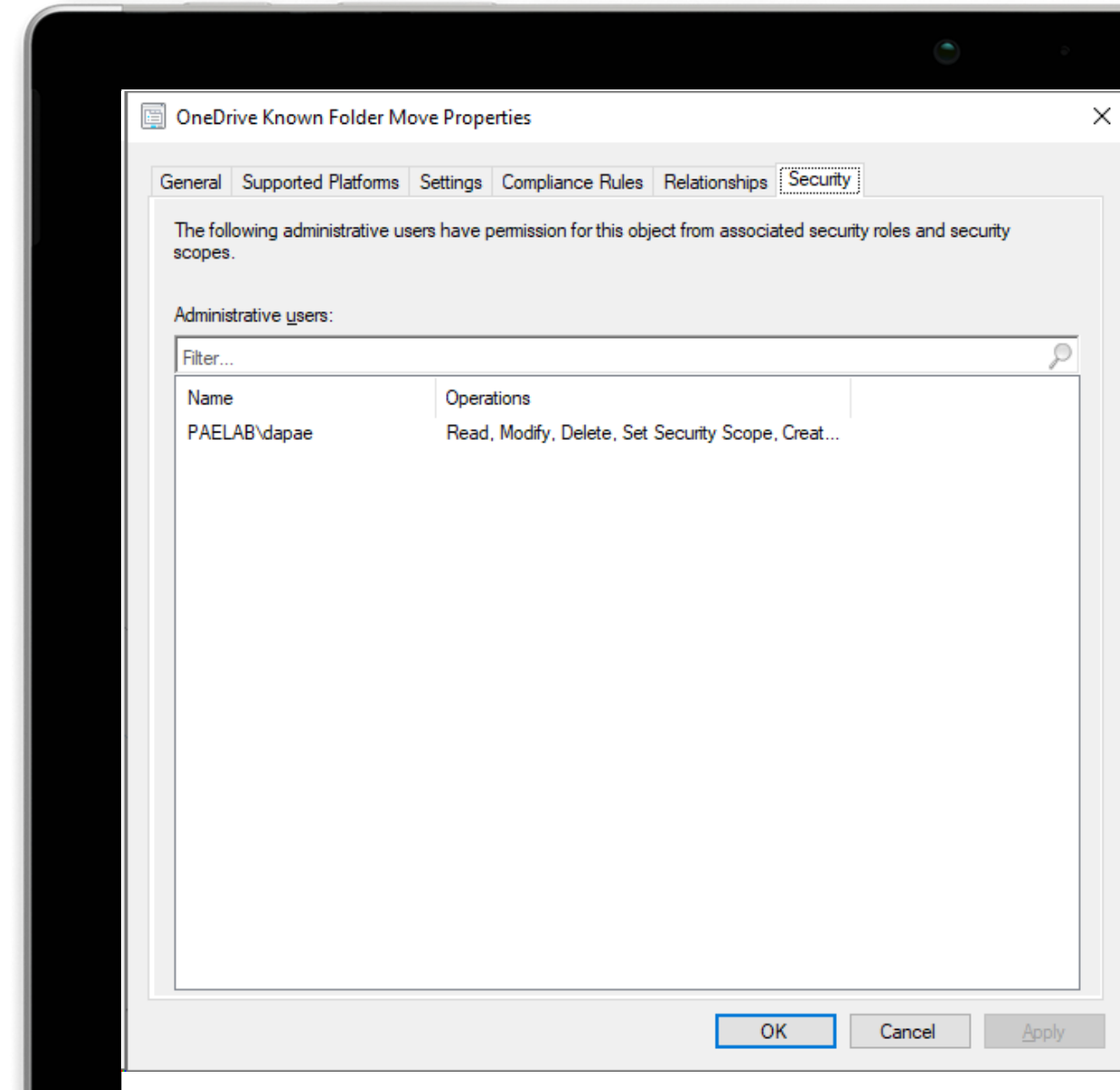


Security

Security content:

This is set using the CI wizard and defines users who can manage a CI.

The administrative users are defined when SCCM is installed/configured.





Configuration Baseline (CB)

Needed to deploy to your device collection

Create a new CB

Add the OneDrive KFM CI

The screenshot shows the 'Create Configuration Baseline' dialog box. The title bar says 'Create Configuration Baseline'. Below the title bar, there is a section titled 'Specify general information about this configuration baseline'. This section contains two text boxes: 'Name' with the value 'OneDrive KFM CB' and 'Description' with the value 'CB for OneDrive CI'. Below this, there is a paragraph of text explaining that the configuration data will be evaluated for compliance. Under the heading 'Configuration data:', there is a table with a search filter and one row of data. The table has columns for Name, Type, Purpose, and Revision. Below the table are four buttons: 'Add', 'Change Purpose', 'Change Revision', and 'Remove'. At the bottom, there is a checkbox labeled 'Always apply this baseline even for co-managed clients' which is currently unchecked. Below that is a section for 'Assigned categories to improve searching and filtering' with an empty text box and a 'Categories...' button. At the very bottom are 'OK' and 'Cancel' buttons.

Create Configuration Baseline

Specify general information about this configuration baseline

Name: OneDrive KFM CB

Description: CB for OneDrive CI

Select the configuration data (configuration items, configuration baselines, and software updates) to be evaluated for compliance by this configuration baseline. This configuration baseline will be assessed as compliant if all the items specified are compliant. Optional items are evaluated only if the relevant application is present on the client devices.

Configuration data:

| Name | Type | Purpose | Revision |
|----------------------------|------------------|----------|----------|
| OneDrive Known Folder Move | Operating System | Required | Latest |

☐ Always apply this baseline even for co-managed clients

Assigned categories to improve searching and filtering:

Categories...

OK Cancel



Deploy to Device Collection

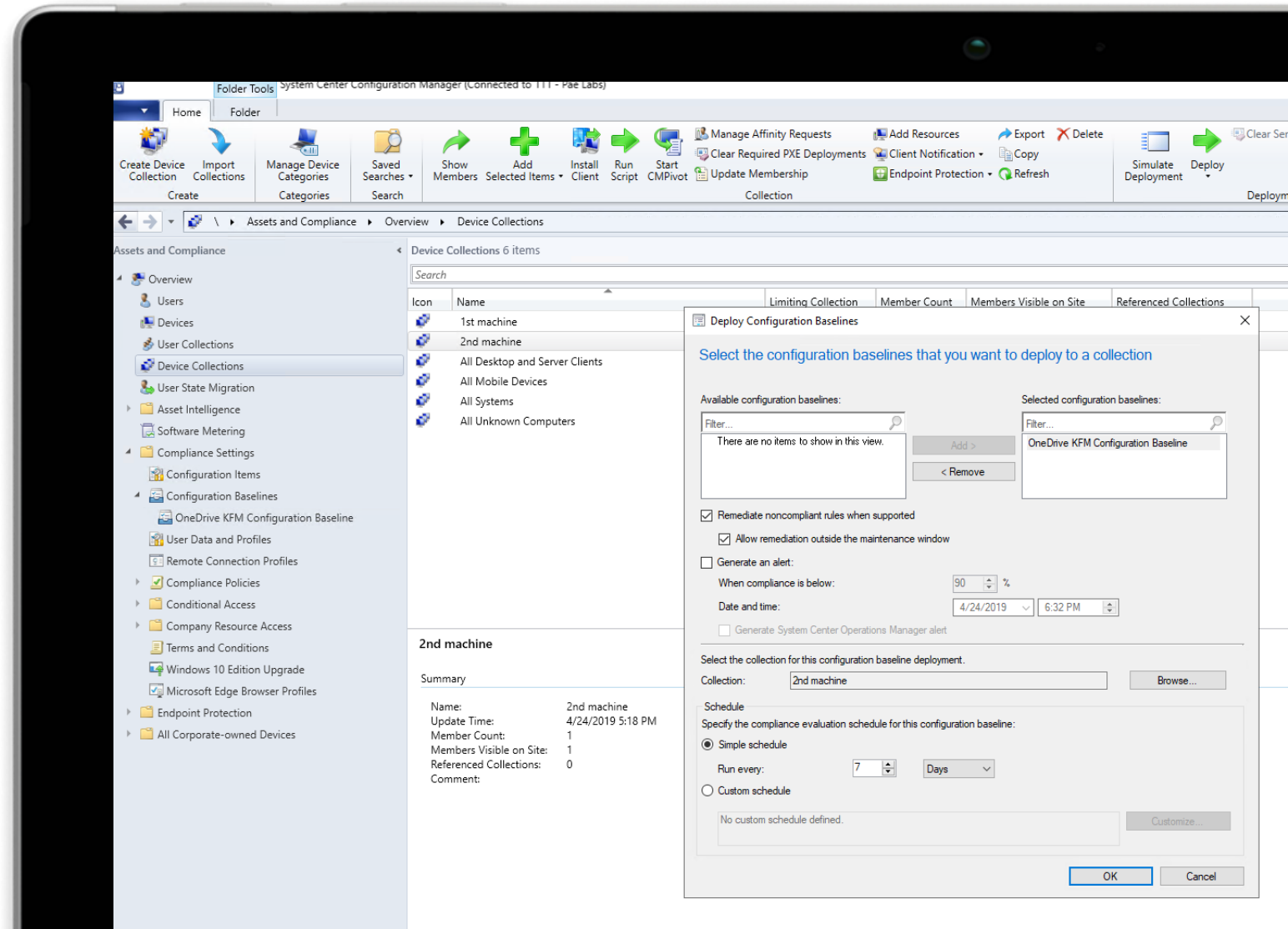
Start with a lab collection

Measure the network impact
and success of the deployment

Review deployment outcomes

Fine-tune the CI scripts if you
need to adjust KFM policies

Repeat for first wave of devices
(IT early adopters)






OneDrive KM Policy Deployed


OneDrive - PAELAB

Your IT department wants you to protect your important folders


These folders are syncing in OneDrive. New and existing files will be added to OneDrive, protected, and available on your other devices, even if you lose this PC.



Desktop
Files protected
Stop protecting



Pictures
Files protected
Stop protecting



Documents
Files protected
Stop protecting

 Your IT department does not allow you to stop folder protection.

Space left in OneDrive after selection: 1,024 GB

Registry Editor

File Edit View Favorites Help

Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\OneDrive

| Name | Type | Data |
|-------------------|-----------|--------------------------------------|
| (Default) | REG_SZ | (value not set) |
| KFMBlockOptOut | REG_DWORD | 0x00000001 (1) |
| KFMOptInWith... | REG_SZ | e8159ed3-b94c-40df-bed4-8b0323fd1436 |
| KFMSilentOptIn | REG_SZ | e8159ed3-b94c-40df-bed4-8b0323fd1436 |
| KFMSilentOptIn... | REG_DWORD | 0x00000001 (1) |

Command Prompt

```
Microsoft Windows [Version 10.0.17763.437]  
(c) 2018 Microsoft Corporation. All rights reserved.  
  
C:\Users\larryd>hostname  
win10-2  
  
C:\Users\larryd>
```



Monitor with SCCM

SSCM will report which devices are compliant/non-compliant

CI scripts can be extended to log to local file or write to Windows event logs

System Center Configuration Manager (Connected to 111 - Pae Labs)

Monitoring > Overview > Deployments

Deployments Search Results - 1 items shown

| Icon | Software | Collection | Purpose | Action | Feature Type | Compliance % |
|------|-------------------------------------|-------------|----------|-----------|--------------|--------------|
| | OneDrive KFM Configuration Baseline | 2nd machine | Required | Remediate | Baseline | 100.0 |

OneDrive KFM Configuration Baseline Status to 2nd machine

General

Software: OneDrive KFM Configuration Baseline
Collection: 2nd machine
Feature Type: Baseline
Purpose: Required
Date Created: 4/24/2019 5:24 PM
Last Date Modified: 4/24/2019 5:24 PM

Compliance Statistics

Compliant: 1
Error: 0
Non-Compliant: 0
Unknown: 0

Total Asset Count: 1 (Last Update: 4/25/2019 5:48:53 PM)
[View Status](#)

Related Objects

- [Collection](#)
- [Baseline](#)



Monitor with PowerShell

Script will check:

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<https://aka.ms/kfmStatus>

alland_WIN10X64 - Notepad

File Edit Format View Help

True | Device_is_KFM_GPO_eligible

True | Desktop_is_in_OneDrive

True | Documents_is_in_OneDrive

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False | KFM_Opt_In_Wizard_Set

True | KFM_Silent_Opt_In_Set

True | KFM_Silent_With_Notification_Set

False | KFM_Block_Opt_In_Set

False | KFM_Block_Opt_Out_Set

19.043.0304.0007 | OneDrive Sync client version



Deploy KFM using Intune

Option 3



KFM using Intune Requirements

- Licensing:
 - EMS E3/E5
 - M365 E3/E5
 - <https://docs.microsoft.com/en-us/intune/licenses>
- Pre-requisites
 - Must be [joined or registered to Azure AD](#)*
 - [Auto-enrollment configured](#)
 - Windows 10 version 1607 or later
 - Intune extension agent is installed

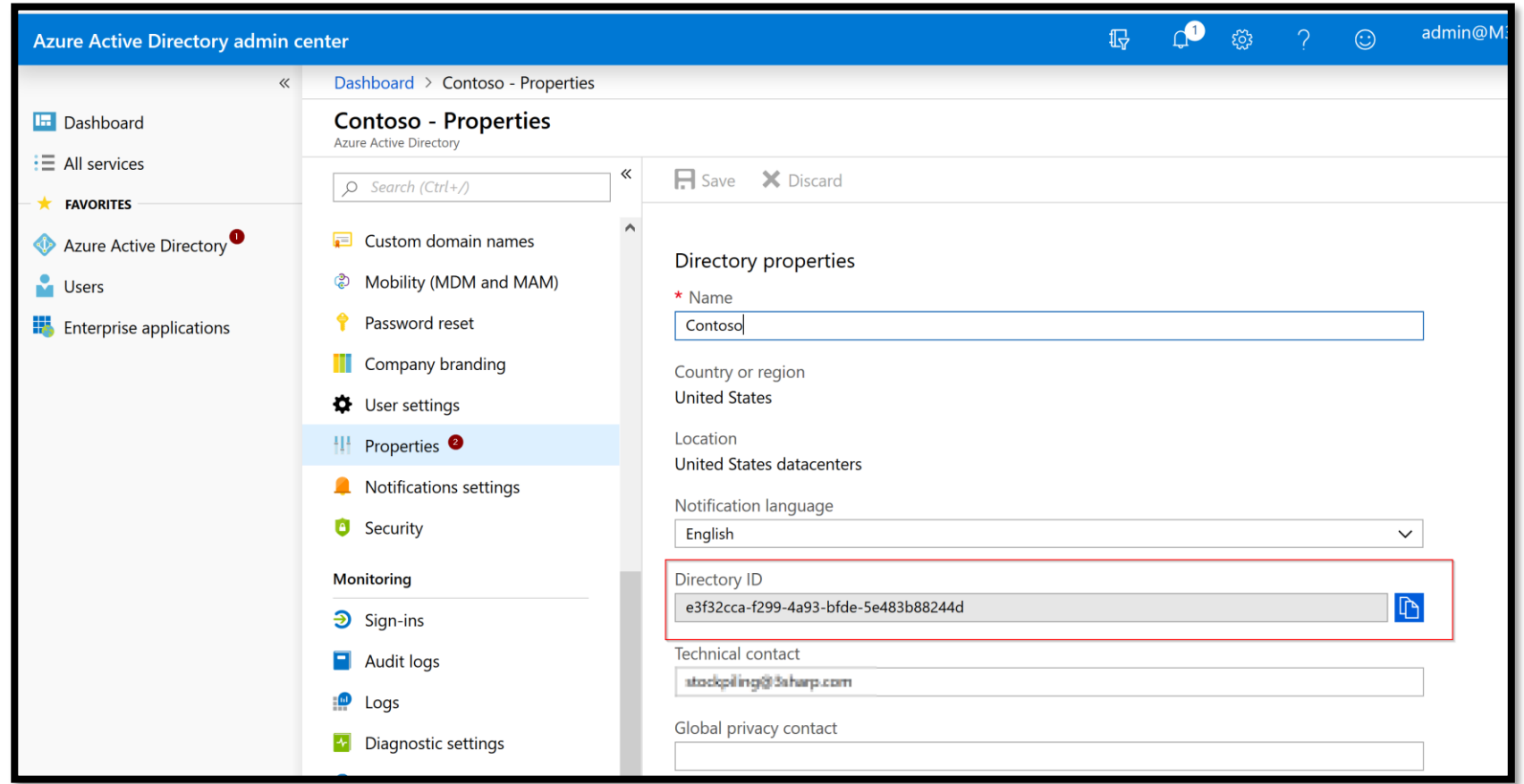


Copy your Azure Tenant ID

Navigate to Azure AD admin center:

<https://aad.portal.azure.com>

Copy the "Directory Id" value





Setup PowerShell Script

Update `$TenantID` with the tenant ID you copied earlier:

```
$TenantID = "XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX"
$registryPath = 'HKLM:\SOFTWARE\Policies\Microsoft\OneDrive'##Path to HKLM keys

If(!(Test-Path $registryPath))
{New-Item -Path $registryPath -Force}

#Enable silent account configuration
New-ItemProperty -Path $registryPath -Name 'SilentAccountConfig' -Value '1' -PropertyType DWORD -Force | Out-Null
#Enable files on demand
New-ItemProperty -Path $registryPath -Name 'FilesOnDemandEnabled' -Value '1' -PropertyType DWORD -Force | Out-Null
#Prevent users from moving their Windows known folders to OneDrive
New-ItemProperty -Path $registryPath -Name 'KFMBlockOptIn' -Value '1' -PropertyType DWORD -Force | Out-Null
#Silently move Windows known folders to OneDrive
New-ItemProperty -Path $registryPath -Name 'KFMSilentOptIn' -Value $TenantID -PropertyType String -Force | Out-Null
#Setting this value to 1 displays a notification after successful redirection
New-ItemProperty -Path $registryPath -Name 'KFMSilentOptInWithNotification' -Value '0' -PropertyType DWORD -Force | Out-Null
#Prevent users from redirecting their Windows known folders to their PC
New-ItemProperty -Path $registryPath -Name 'KFMBlockOptOut' -Value '1' -PropertyType DWORD -Force | Out-Null
```



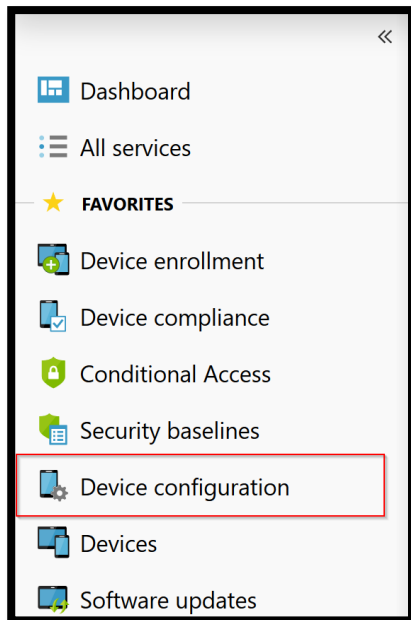

Deploy your script

1

Browse to:

<https://devicemanagement.portal.azure.com> and click on

Device Configuration



2

Add your powershell script.

Settings and Scope can be left as default.

Add PowerShell Script

Windows 10 and later

* Name
OneDrive KFM ✓

Description
Enable OneDrive KFM ✓

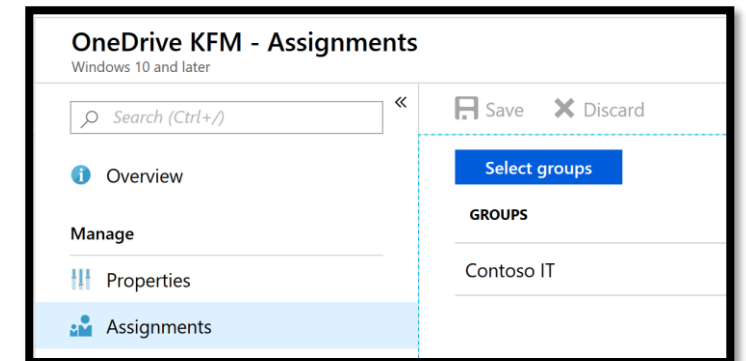
* Script location: ⓘ OneDriveKFM.ps1 📁

Settings
Configure >

Scope (Tags)
0 scope(s) selected >

3

Assign your script to a pilot group to test out the behavior.





Monitor and troubleshoot

Monitor run status

You can monitor the run status of PowerShell scripts for users and devices in the Azure portal.

In PowerShell scripts, select the script to monitor, choose **Monitor**, and then choose one of the following reports:

- Device status
- User status

Monitor

Device status

User status

Troubleshoot scripts

Agent logs on the client machine are typically in `\ProgramData\Microsoft\IntuneManagementExtension\Logs`. You can use [CMTrace.exe](#) to view these log files.

| Name | Date modified | Type | Size |
|----------------------------|----------------------|----------|----------|
| _IntuneManagementExtension | 11/15/2017 4:25 AM | LOG File | 2,050 KB |
| AgentExecutor | 10/28/2017 11:26 ... | LOG File | 1 KB |
| ClientHealth | 11/20/2017 10:36 ... | LOG File | 125 KB |
| IntuneManagementExtension | 11/15/2017 4:25 AM | LOG File | 497 KB |

Here is the path: `c:\programdata\microsoft\intunemanagementextension\logs`. You can download configMgr tools (cmtrace.exe) to view the log friendly and dynamically

- IntuneManagementExtension.log is the main client log file, it contains all the agent check in, policy request, policy processing and reporting activities.
- AgentExecutor.log is the log file to track Powershell script execution details.
- ClientHealth.log is the log file to track sidecar agent client health activities

<https://docs.microsoft.com/en-us/intune/intune-management-extension>



Monitor with PowerShell

Script will check:

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19.043.0304.0007 | OneDrive Sync client version