Cloud-Based Endpoint Management

Microsoft Intune

Level 200 Course

12-10-2023   !! COURSE WILL START AT 09h15 !!

© 2023 Ingram Micro Inc. All Rights Reserved.

Diego Lens   Ingram Micro Benelux

1

Cloud-Based Endpoint Management

Microsoft Intune

12/10/2023

Level 200 Course

© 2023 Ingram Micro Inc. All Rights Reserved.

Diego Lens   Ingram Micro Benelux

2

3

4

Connected Workplace

Connected Workplace
Together We Achieve More

Work together, work smarter and stay productive, from anywhere with our comprehensive suite of collaboration apps, digital experiences, and virtual desktops, designed to help you do more.

Collaboration Apps
Productivity Suits, conferencing

Virtual Desktops
Remote Work, Desktop Virtualization, OS

Employee Experience
Workflow insights, resources, learning

+21%
Virtual Desktop market CAGR growth by 2030

+50%
Team collaboration software growth by 2030.

57%
Reason for digital investments : Employee Experience

Windows 365 and Azure Virtual Desktop Story Telling

Azure Virtual Desktop : Setup a POC

Azure Virtual Desktop : Advanced Topics

$$EX + CX = TX$$
Employee Experience + Customer Experience = Total Experience

INGRAM CLOUD

5

Business Performance

Business Performance
Work at the Speed of Modern Business

Build a fine-tuned business engine to power your performance with our tailor-made technological approach to equip your teams with CRM, ERP software, and imaginative workforce automation.

CRM
Customer Relationship Management

ERP
Enterprise Resource Planning

Workforce Automation
No/low Code, Power Automate

We want to help modernize and transform your business. With a focus on facilitating your team's needs, we are taking a tailor-made technological approach to personalize what strategies work best for you.

CRM:
CRM technology directly aligns with our growth mindset – at the end of the day, the goal of CRM is to foster and sustain existing and future customer relationships. Through this technology, you can generate multichannel marketing campaigns, nurture sales-ready leads and align sales and marketing with planning and tracking tools that integrate with existing apps and services.

ERP:
In the evolving digital landscape, it is imperative to stay up to date with the latest technologies to move forward. An ERP software suite can help manage day-to-day business processes that push beyond just financial data – discover how you can accelerate your business, grow your customer base and increase your profit margins with ERP.

Workflow Automation:
Workflow Automation is your go-to resource for building custom apps that connect to your existing data and systems, without the need for code. Through low-code platforms, you can build solutions that support workflow automation, AI, secure data access, seamless data analysis and visualization capabilities

INGRAM CLOUD

6

Ingram Micro Cloud Enablement 2023

Enablement
http://bit.ly/ingramcloud

Cloud Champion
https://ingram.cloudchampion.be
https://ingram.cloudchampion.nl

Newsletter
http://bit.ly/imc-email

7

7

Stay up to date : Subscribe for Email

Stay updated

- Latest trends
- Latest trainings
- Events
- Tradeshows

Subscribe : http://bit.ly/imc-email
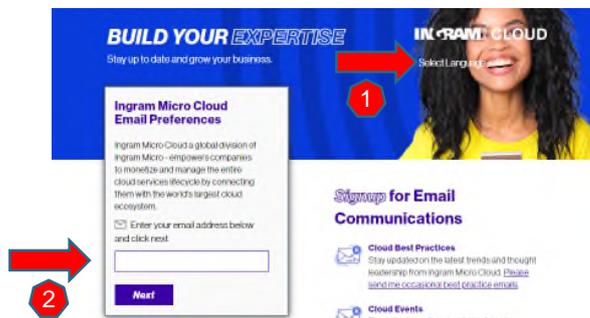
8

Cloud-Based EndPoint Manager
Microsoft Intune

Course
Overview

Diego Lens

INGRAM MICRO® CLOUD
▶ *More as a Service*™

9
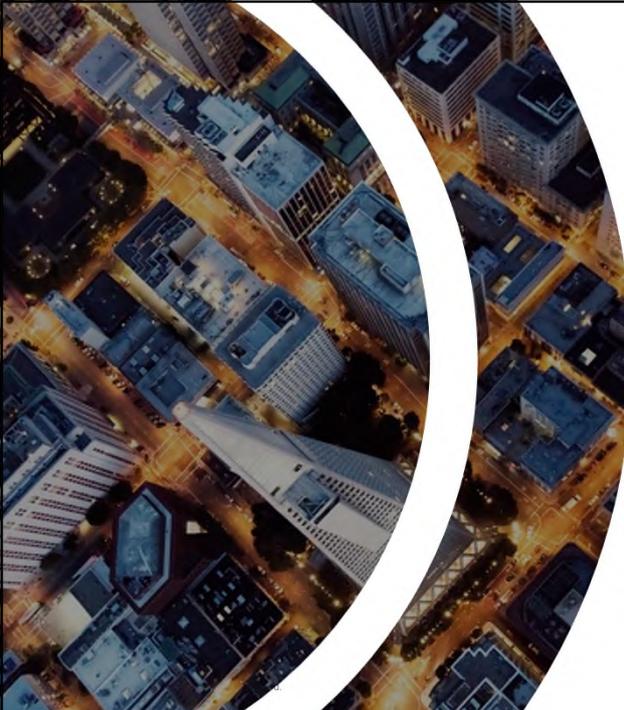
Course Overview

- **What is Microsoft Intune**
- **Getting Started with Microsoft Intune**
- **Windows Autopilot with Intune**
- **Deploy Applications from Store**
- **Device Restrictions & Policies**
- **Modern Roaming Profiles**
- **Install WIN32 Applications**
- **Conditional Access**
- **Install Powershell script with Intune**
- **New Developments**

INGRAM® CLOUD

10

10

Introduction :

What is Microsoft Intune

11

11

| Intune | ⊹ | SCCM Config Manager |

Microsoft Endpoint Manager   Azure Arc

Management

Policy Configuration Automation

Microsoft Endpoint Manager
Microsoft Intune

Microsoft Endpoint Manager
Configuration Manager

Microsoft Threat Protection

Identity   Devices   Cloud apps   Data   Infrastructure

Satya Nadella : Keynote Ignite 2019

12

12

In 2019…

https://devicemanagement.microsoft.com/

Configuration Manager

Device Management
Admin Center (DMAC)

Microsoft Intune

https://portal.azure.com
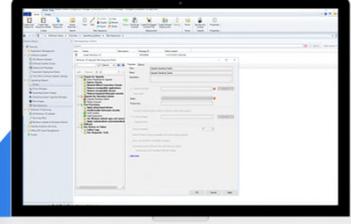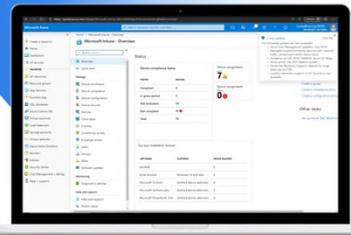
© 2020 Ingram Micro Inc. All Rights Reserved.

13

In 2020

Other endpoint
management tools

Integrated solution for IT admins to understand and take
action across all endpoints in their estate
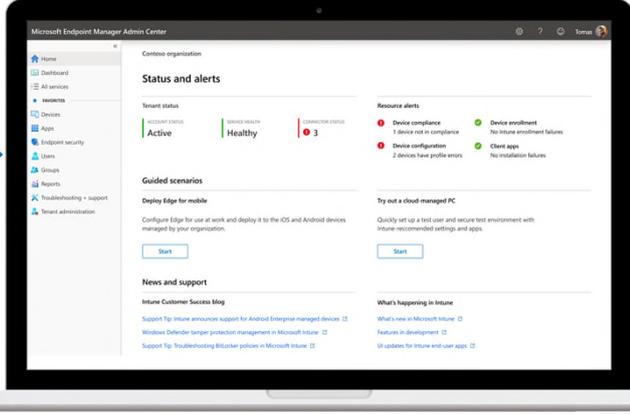
Microsoft Endpoint Manager

Feature integration: Desktop
Analytics, Windows Autopilot, etc.

Configuration Manager

Surfaces familiar functionality and
ingests data from ConfigMgr

Microsoft Intune

Intune features and functionality
replicated into MEM Console

https://endpoint.microsoft.com/

© 2020 Ingram Micro Inc. All Rights Reserved.

14

Vision 2023

© 2023 Ingram Micro Inc. All Rights Reserved.

https://learn.microsoft.com/en-us/mem/intune/fundamentals/what-is-intune

15

15

Cloud powered endpoint management

© 2020 Ingram Micro Inc. All Rights Reserved.

16

16
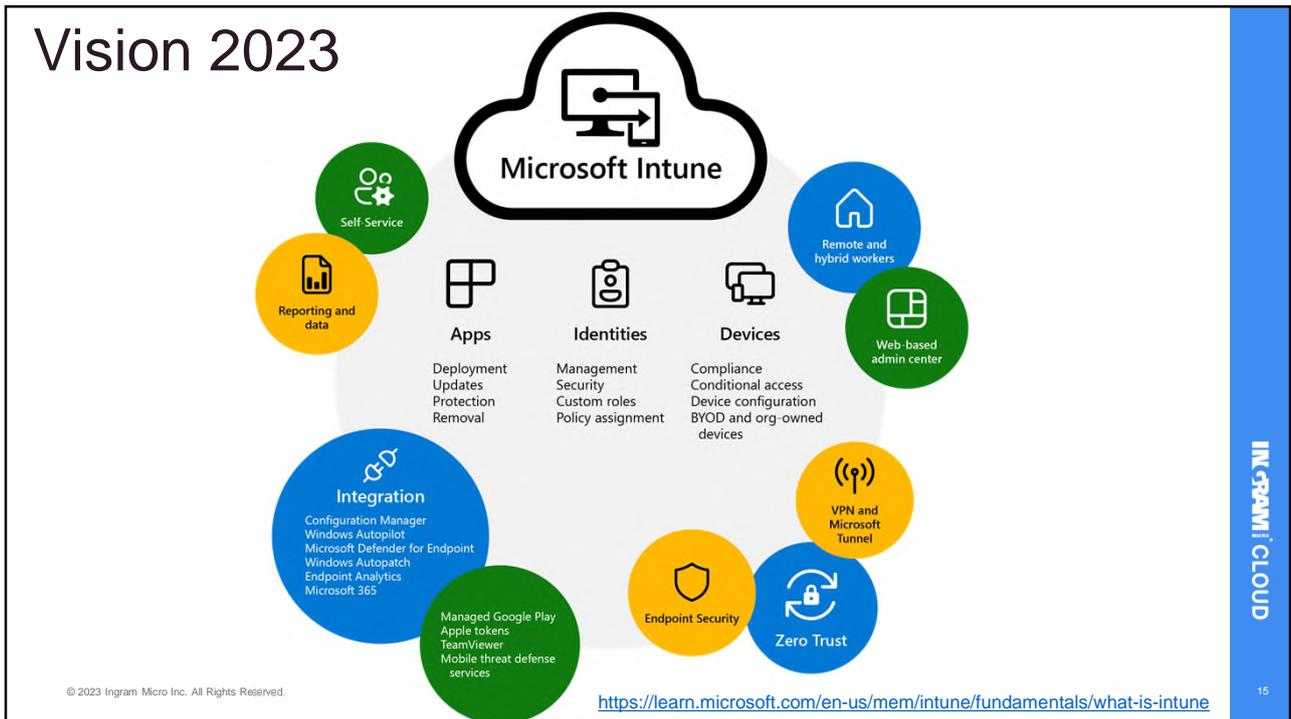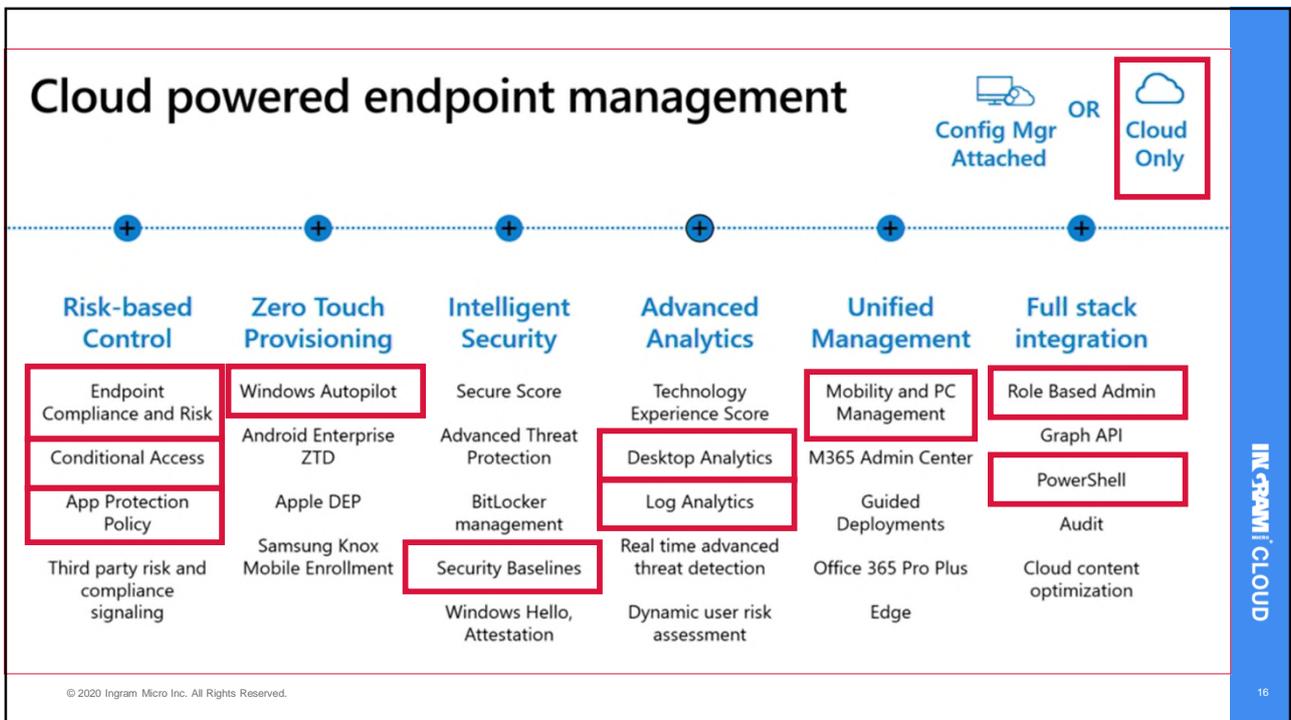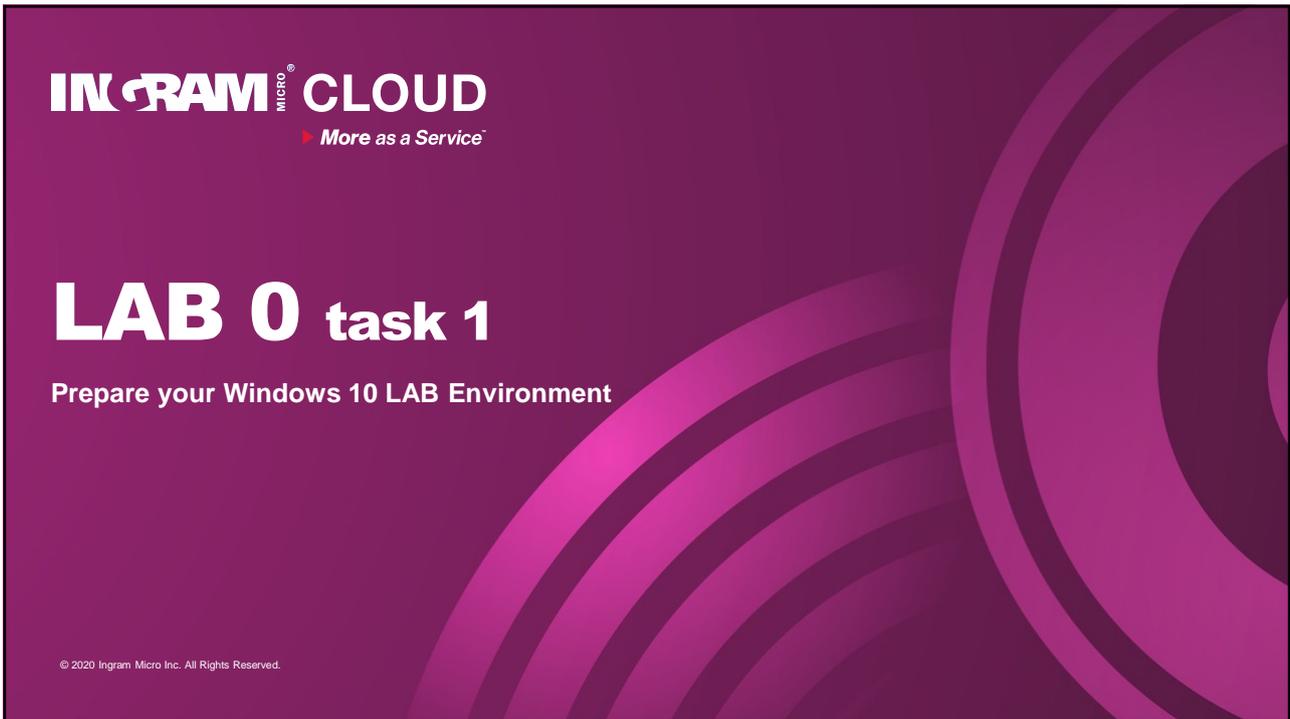
LAB 0 task 1

Prepare your Windows 10 LAB Environment

17

Licensing :

Microsoft Intune Licensing

18

18

Microsoft Intune plans

Intune Plan 1

Included in

· Microsoft 365 E3

· Microsoft 365 E5

· Microsoft 365 F1

· Microsoft 365 F3

· Microsoft 365 Business Premium

· Enterprise Mobility + Security E3

· Enterprise Mobility + Security E5

8 $

*Also available as individual add-ons

**Additional advanced features to be added in future releases

aka.ms/IntuneSuitePricing

Add-On

Intune Suite

Add to Plan 1 to utilize these solutions

Included solutions*

• Remote help
• Endpoint Privilege Management
• Advanced Endpoint analytics
• Advanced app management
• Cloud certificate management
• *Future advanced solutions***
• All Intune Plan 2 features

Prerequisite
• Intune Plan 1

10 $

Add-On

Intune Plan 2

Add to Plan 1 to utilize these features:

Included features

• Tunnel for Mobile App Management
• Specialty device management
• *Future advanced capabilities***

Prerequisite
• Intune Plan 1

4 $

2023 March

INGRAM CLOUD

19

Microsoft Intune Single features

Microsoft Intune Remote Help : $3,50/u/m

Microsoft Intune Endpoint Privilege Management (EPM) : $3,00 /u/m

INGRAM CLOUD

20

20

Module 1 :

Getting Started with Microsoft Intune

INGRAM CLOUD

21

21

Mobile Device Management (MDM)

INGRAM CLOUD

22

22

Enroll devices to access corporate resources

User

Devices enrolled

Microsoft Intune

IT

Actions upon device enrollment
- Deploy email, VPN, and WiFi profiles
- Deploy certificates
- Deploy and install apps
- Apply and enforce device configuration settings
- Collect hardware and software inventory data

23

23

Azure Active Directory Devices

- Join Type
  - Azure Active Directory Registered
  - Azure Active Directory Joined
- MDM
  - None
  - Microsoft Intune
- Compliant

Name	Enabled	OS	Version	Join Type	Owner	MDM	Compliant
☐ DESKTOP-TEO3AUJ	✅ Yes	Windows	10.0.18362.239	Azure AD joined	Megan Bowen	Microsoft Int...	N/A
☐ DESKTOP-T1AENK7	✅ Yes	Windows	10.0.18362.0	Azure AD registered	Alex Wilber	None	N/A
☐ DESKTOP-L8N3TD7	✅ Yes	Windows	10.0.18363.592	Azure AD joined	Adele Vance	Microsoft Int...	✅ Yes
☐ DESKTOP-LBIB7UL	✅ Yes	Windows	10.0.18363.592	Azure AD joined	Alex Wilber	Microsoft Int...	✅ Yes
☐ DESKTOP-MI41END	✅ Yes	Windows	10.0.18362.0	Azure AD joined	Megan Bowen	None	N/A
☐ DESKTOP-H2SH332	✅ Yes	Windows	10.0.18363.592	Azure AD joined	Alex Wilber	Microsoft Int...	✅ Yes

24

24

Azure Active Directory Registered

- Windows 10 > Settings > Accounts > Access Work or School
  - Windows Icon
- Content Protection
- No Device Protection

Access work or school

Get access to resources like email, apps, and the network. Connecting means your work or school might control some things on this device, such as which settings you can change. For specific info about this, ask them.

Connect

Work or school account
AlexW@M365x360184.OnMicrosoft.com

⌂ Managed by mddprov account

Connecting to work or school allows your organization to control some things on this device, such as settings and applications.

Areas managed by mddprov account

mddprov account manages the following areas and settings. Settings marked as Dynamic might change depending on device location, time, and network configuration.
More information about Dynamic Management

Connection info

Management Server Address:
https://wip.mam.manage.microsoft.com:444/checkin

25

Azure Active Directory Joined

- Windows 10 > Settings > Accounts > Access Work or School
  - Briefcase Icon
- Device Protection
- Enrolled for Intune

Access work or school

Get access to resources like email, apps, and the network. Connecting means your work or school might control some things on this device, such as which settings you can change. For specific info about this, ask them.

Connect

Connected to Contoso's Azure AD
Connected by AlexW@M365x360184.OnMicrosoft.com

⌂ Managed by Contoso

Connecting to work or school allows your organization to control some things on this device, such as settings and applications.

Areas managed by Contoso

Contoso manages the following areas and settings. Settings marked as Dynamic might change depending on device location, time, and network configuration.
More information about Dynamic Management

Connection info

Management Server Address:
https://r.manage.microsoft.com/devicegatewayproxy/cimhandler.ashx

26

Mobile Application Management (MAM)

27
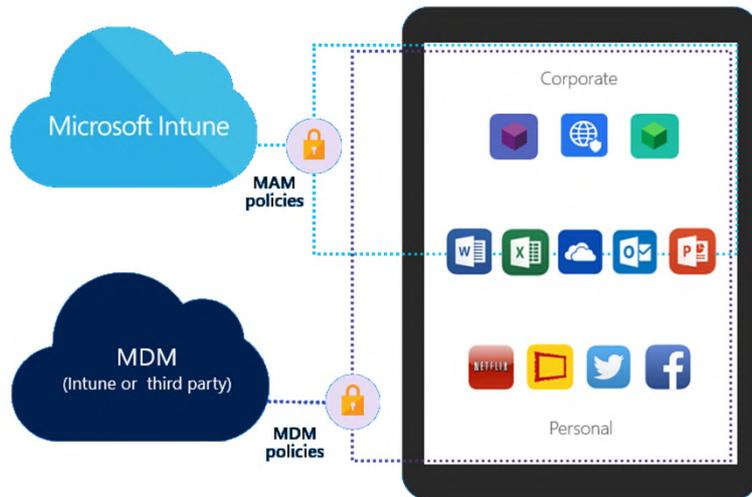
Unified Endpoint Management (UEM)

Figure 1. Magic Quadrant for Unified Endpoint Management

Microsoft : Microsoft Endpoint Management
Vmware : Workspace ONE - Airwatch
IBM : IBM MaaS360®

Source: Gartner (August 2019)

28

Intune Licensing

Configured on User level

Azure Active Directory > Users > {User} > Licenses

Intune is included in the following licenses:

Microsoft 365 E5

Microsoft 365 E3

Enterprise Mobility + Security E5

Enterprise Mobility + Security E3

Microsoft 365 Business Premium

Microsoft 365 F1

Microsoft 365 Government G5

Microsoft 365 Government G3

29

Enable Intune MDM Authority

Azure Portal > Intune> Device Enrollment

Learn more about choosing your MDM Authority.

- ● Intune MDM Authority
- ○ Configuration Manager MDM Authority
- ○ None

Choose

MDM authority : Intune

Account status : Active

30

Enable MDM & MAM User Scope

MDM user scope ⓘ   None   Some   **All**

MAM User scope ⓘ   None   Some   **All**

Azure Portal > Azure Active Directory > Mobility (MDM + MAM)

31

31

Configure Company Branding

Edit company branding
Azure Active Directory

💾 Save ✕ Discard

Sign-in page background image
Image size: 1920x1080px
File size: <300KB
File type: PNG, JPG, or JPEG ⓘ

Remove
Select a file

Banner logo
Image size: 280x60px
File size: 10KB
File type: Transparent PNG, JPG, or JPEG
ⓘ

Remove
Select a file

Username hint ⓘ

Sign-in page text ⓘ   Training LAB

Advanced settings

Sign-in page background color ⓘ

Square logo image
Image size: 240x240x (resizable)
Max file size: 50KB
PNG (preferred), JPG, or JPEG ⓘ

Remove
Select a file

32

32

CNAME DNS Entries

https://docs.microsoft.com/en-us/intune/enrollment/windows-enroll

Simplify Windows enrollment without Azure AD Premium

To simplify enrollment, create a domain name server (DNS) alias (CNAME record type) that redirects enrollment requests to Intune servers. Otherwise, users trying to connect to Intune must enter the Intune server name during enrollment.

Step 1: Create CNAME (optional)
Create CNAME DNS resource records for your company's domain. For example, if your company's website is contoso.com, you would create a CNAME in DNS that redirects EnterpriseEnrollment.contoso.com to enterpriseenrollment-s.manage.microsoft.com.

Although creating CNAME DNS entries is optional, CNAME records make enrollment easier for users. If no enrollment CNAME record is found, users are prompted to manually enter the MDM server name, enrollment.manage.microsoft.com.

Type	Host name	Points to	TTL
CNAME	EnterpriseEnrollment.company_domain.com	EnterpriseEnrollment-s.manage.microsoft.com	1 hour
CNAME	EnterpriseRegistration.company_domain.com	EnterpriseRegistration.windows.net	1 hour

INGRAM MICRO® CLOUD

33

33

INGRAM MICRO® CLOUD
▶ *More as a Service*™

LAB 0 task 2
LAB 1

Getting Started with Microsoft Intune

34

Module 2 :

Windows Autopilot with Intune

35

35

Traditional Windows deployment

OFFICE & APPS

DRIVERS · POLICIES

SETTINGS

Build a custom image, gathering everything else that's necessary to deploy

+

Deploy image to a new computer, overwriting what was originally on it

=

Time means money, making this an expensive proposition

36

Modern Windows deployment

Un-box and turn on
off-the-shelf Windows PC

+

Transform with minimal
user interaction

=

Device is ready
for productive use

37

Azure AD Join for Windows 10

Azure AD Join makes it possible to connect work-owned Windows 10 devices to your company's Azure Active Directory.

With Azure AD Join, you can auto enroll devices in Microsoft Intune for management.

- Intune auto-enrollment
- Enterprise-compliant services
- Single sign-on from the desktop to cloud and on-premises applications with no VPN
- Support for hybrid environments
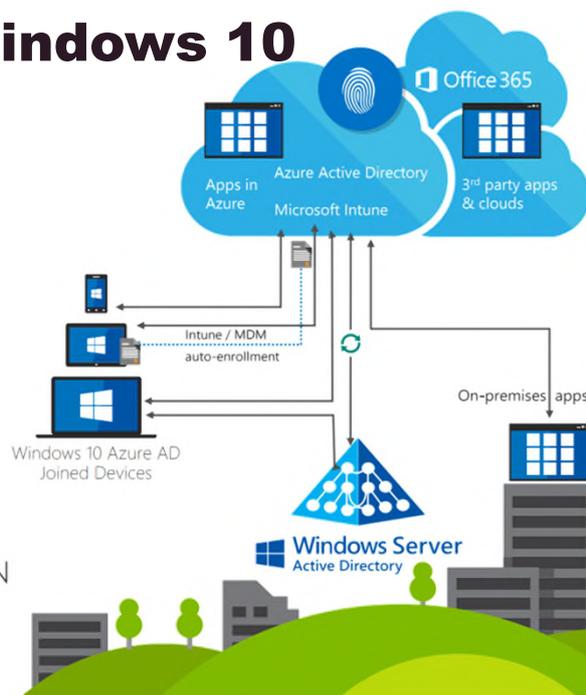
38

19

Three simple steps

	Register devices
	Assign a profile
	Deploy

39

Three simple steps

	Register devices
	Assign a profile
	Deploy

- **Have devices registered automatically**
  - Request clean images, choice of Windows 10 version at the same time (if available)
  - Specify group tag to help segment devices by purpose
  - Devices are automatically tagged with the purchase order ID
- **Register devices yourself via Intune for testing and evaluation using Get-WindowsAutopilotInfo PowerShell script**
- **Register existing Intune-managed devices automatically with harvested hardware hash**

40

Three simple steps

Register devices

Assign a profile

Deploy

- **Use Intune:**
  - Select profile scenario (user-driven, self-deploying)
  - Configure needed settings
  - Assign to an Azure AD group so Intune will automatically assign to all devices in the group
- **Use a dynamic Azure AD group to automate this step**
  - Consider static Azure AD group for exceptions

41

Three simple steps

Register devices

Assign a profile

Deploy

- **Boot up each device**
- **Connect to network (Wi-Fi, Ethernet)**
- **Enter credentials (if required)**

42

What is Autopilot ?

Is a way to get a device under Modern Management

It is not a deployment tool

It's a way to deliver devices directly to the end user without Imaging

Company Branding needs to be configured

Devices must have Network Connectivity and must have access to Internet

Pre-Installed Windows 10 Professional version 1703 or later

Licensing : Azure Active Directory Premium P1 or P2

Users must be allowed to Join Devices in Azure AD

Microsoft Intune is needed to Manage the devices

43

43

Windows Autopilot // Deployment Scenarios

AVAILABLE in 1703	AVAILABLE in 1809	AVAILABLE in 1903	AVAILABLE in 1903	AVAILABLE in 1809
User-driven mode with Azure AD Join	**User-driven mode with Hybrid Azure AD join**	**Windows Autopilot white glove (preview)**	**Self-deploying mode (preview)**	**Windows Autopilot for existing devices**
Join device to Azure AD, enroll in Intune/MDM	Join device to AD, enroll in Intune/MDM	White glove partners or IT staff can pre-provision Windows 10 PC to be fully configured and business-ready for an org or user	No need to provide credentials, automatically joins Azure AD	Windows 7/8.1 to Windows 10
	Coming soon! Deploy over VPN (preview in Q1CY20, 1903+)	**General availability targeting CY20**	**General availability targeting CY20**	ConfigMgr task sequence, followed by Windows Autopilot user-driven mode
				New! Hybrid Azure AD Join support

44

Windows Autopilot overview

45

Windows Autopilot White Glove

- Windows Autopilot enables organizations to easily provision new devices
- Users must wait, while the applications/updates are installing
- This part can be done by the Distributor or Partner
- Windows 10, version 1903 or later is required
- TPM 2.0 Chip is required
- The Image is Resealed after the process

Provision   Reseal

46
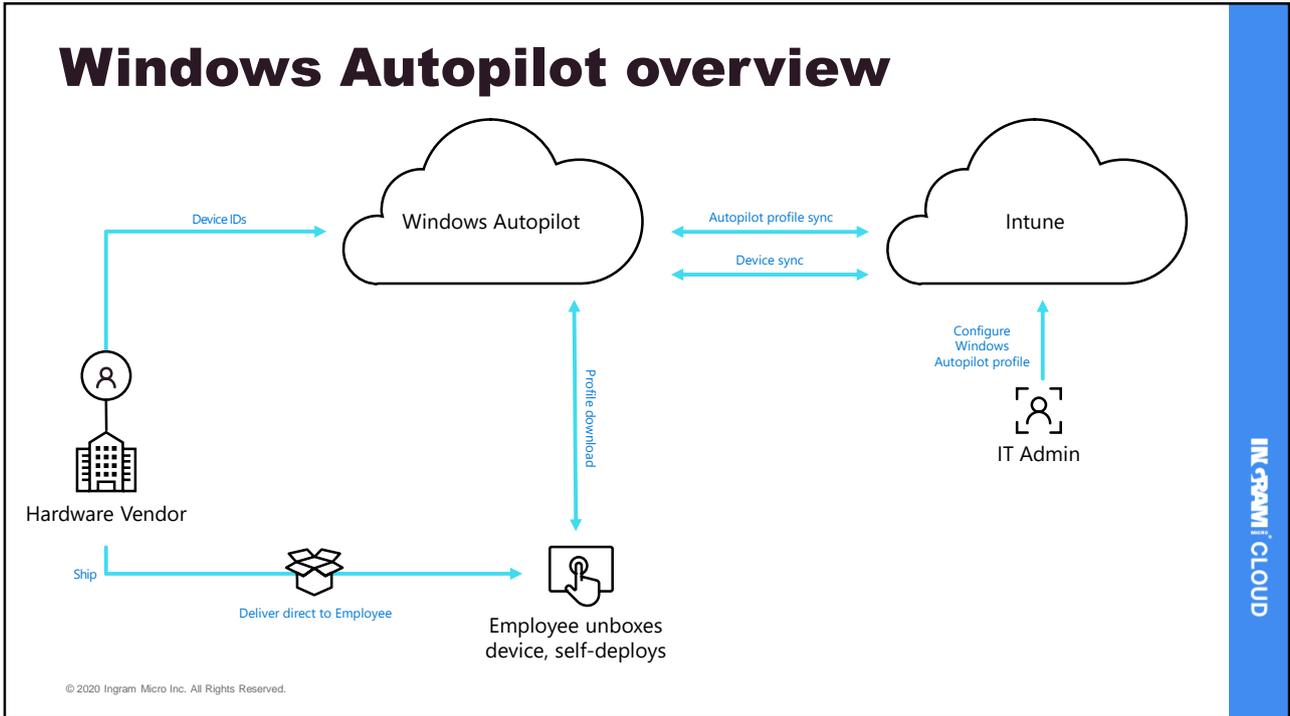
46

The deployment process // Transforming the device

- **Office 365 ProPlus**
- **Single-file MSIs (LOB apps)**
- **Intune Management Extensions**
- **Security Baselines**
- **Administrative Templates**
- **Software Update rings**
- **OneDrive for Business**
- **Kiosk templates**
- **Device Firmware Configuration Interface (DFCI)**

47

Windows Autopilot Device Configurations

there are multiple ways how devices can be identified :

Device serial number	Windows product ID	Hardware hash	Manufacturer name	Device model
	Yes	Yes		
Yes		Yes		
Yes	Yes	Yes		
Option		Yes		
Option	Yes			

48

48

Windows Autopilot Product Key ID

49

Order Dell PC + Add Autopilot DeviceID

More Info : dell@ingrammicro.be

50

Order Dell PC + Add Autopilot DeviceID
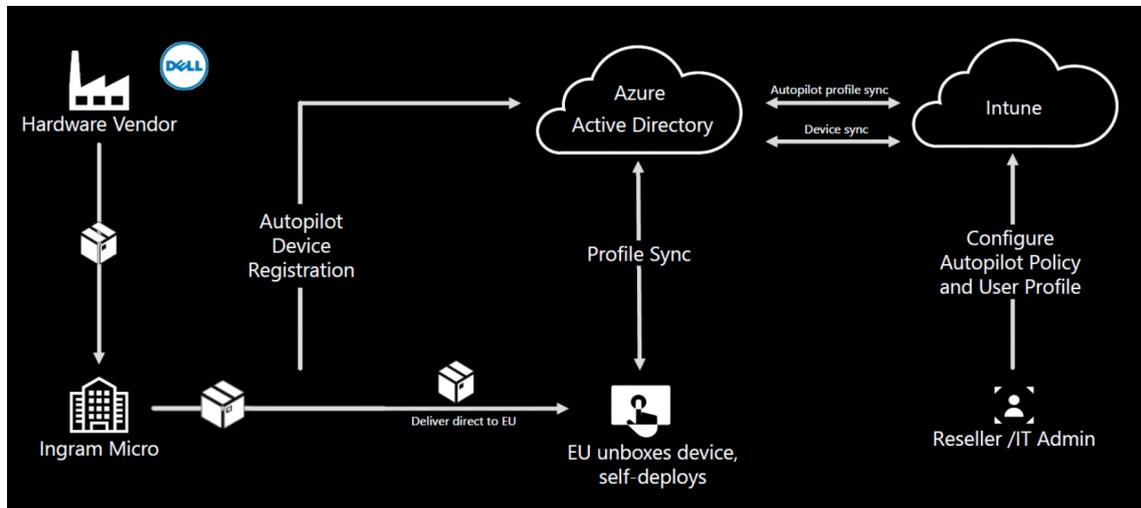
© 2020 Ingram Micro Inc. All Rights Reserved.

51

Collect Hardware Device ID (Hardware Hash)

https://aka.ms/autopilotShell

Get-WindowsAutoPilotInfo.ps1

```
PowerShell                                                    Copy

md c:\\HWID
Set-Location c:\\HWID
Set-ExecutionPolicy -Scope Process -ExecutionPolicy Unrestricted
Install-Script -Name Get-WindowsAutoPilotInfo
Get-WindowsAutoPilotInfo.ps1 -OutputFile AutoPilotHWID.csv
```
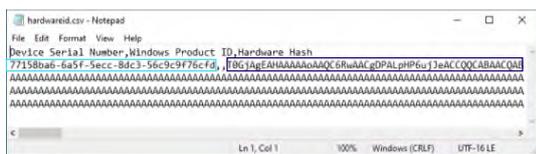

© 2020 Ingram Micro Inc. All Rights Reserved.
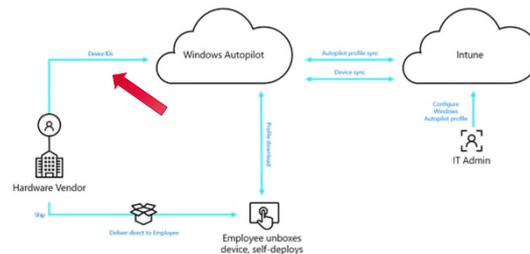
52

Autopilot Deployment Profile

- Autopilot deployment profiles are used to configure the Autopilot devices
- You can create up to 350 profiles per tenant.

53

Windows Autopilot // Top 10 new features coming soon)

1. **User-driven Hybrid Azure AD Join over the internet – VPN support (Q1CY20 preview)**
2. **Integration with Configuration Manager for running task sequences (H1CY20)**
3. **Group tag editing (Q4CY19)**
4. **Direct computer name assignment (Q4CY19 for Azure AD)**
5. **Windows Autopilot deployment report (Q4CY19)**
6. **Aligned naming options for Azure AD and Hybrid Azure AD (CY20)**
7. **Guided scenarios to help with initial setup and configuration**
8. **ESP enhancements for targeting, disabling user ESP, Nth user**
9. **Full network documentation (URLs, IP addresses, etc.)**
10. **Windows 10 configuration for features, language packs, in-box apps**

54

10/13/2023
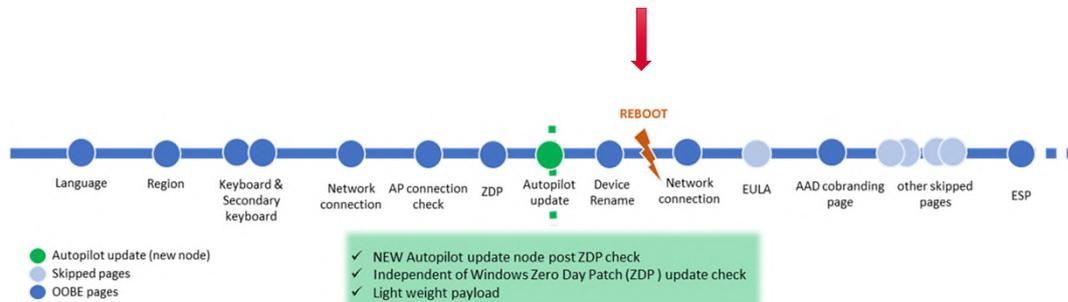
Windows Autopilot Process

*ZDP : Zero Day Patch

© 2020 Ingram Micro Inc. All Rights Reserved.

55

Windows Autopilot Reset Feature

Removes personal files, apps & settings

Reapplies a device's original settings

Maintains the device's identity connection to Azure AD

Maintains the device's management connection to Intune

Trigger Windows Autopilot Reset from the PC :

CTRL + ⊞ + R.

Trigger Windows Autopilot Reset from Intune :

Devices > All Devices > Select Device > More > Autopilot Reset

© 2020 Ingram Micro Inc. All Rights Reserved. https://docs.microsoft.com/en-us/mem/autopilot/windows-autopilot-reset

56

28

Additional Information about Autopilot

https://docs.microsoft.com/en-us/windows/deployment/windows-autopilot/add-devices

https://docs.microsoft.com/en-us/intune/enrollment/enrollment-autopilot

https://docs.microsoft.com/en-us/windows/deployment/windows-autopilot/white-glove

57

57

LAB 2

Windows Autopilot with Microsoft Intune

58
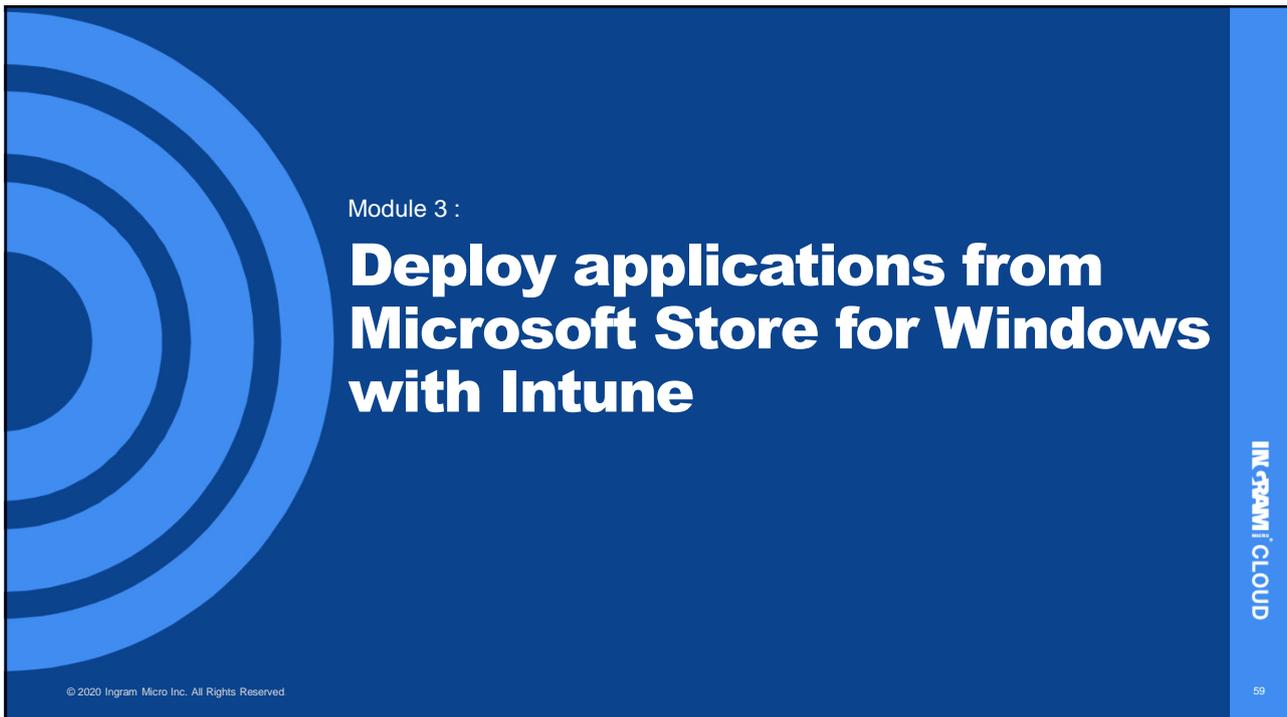
Module 3 :

Deploy applications from Microsoft Store for Windows with Intune

59

59

Universal Windows Platform (UWP)

- **One Operating System**
  - One Windows core for all devices

- **One App Platform**
  - Apps run across every family

- **One Dev Center**
  - Single submission flow and dashboard

- **One Store**
  - Global reach, local monetization
  Consumers, Business & Education
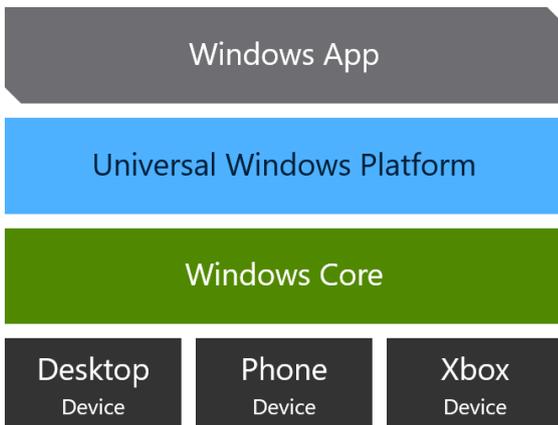
Windows App

Universal Windows Platform

Windows Core

Desktop	Phone	Xbox
Device	Device	Device

60

60

60

Microsoft Store for Business (Legacy)

- distribute free ~~and paid apps~~
- no cost
- manage Microsoft Store apps and private line-of-business apps in one inventory
- Private Store can be Activated
- https://businessstore.microsoft.com

https://learn.microsoft.com/en-us/microsoft-store/

61
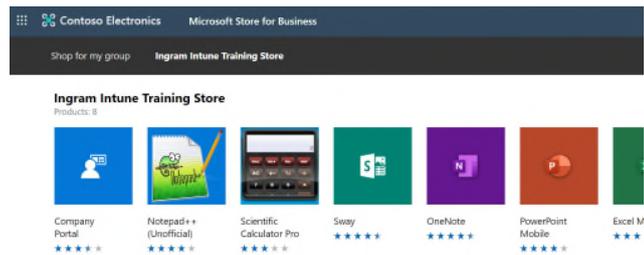
61

Microsoft Store for Business/Education

- Centralized Management
  - SMB
  - Schools
- Private Store offering
  - Make apps available for multiple persons
- App license Management

62

62

Microsoft Store Apps in the past …

- Not very popular

- Started with Windows 8

- Limited number of Applications

- Full-Screen mode Applications

- Updated in Windows 10 …
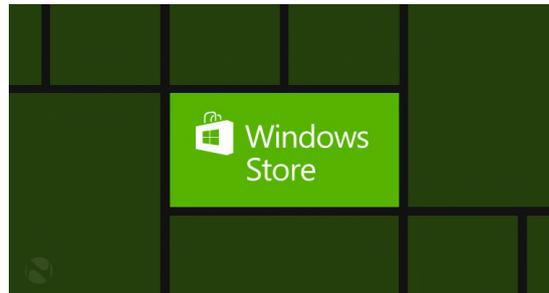
63

Microsoft Store for Business announcements

Microsoft Store for Business & Education only Free Applications		Microsoft Store for Business & Education ending in 2023		Microsoft Store for Business & Education Retirement		Microsoft Store for Business Retirement Last Stage
	Microsoft Building new Microsoft Store		Microsoft Store for Business Retirement (posponed)		Microsoft Store for Business Retirement Stage 1	
14-04-2021	06-2021	07-2021	31-03-2023	31-04-2023	15-05-2023	15-09-2023

64

ⓘ Important

The retirement of Microsoft Store for Business and Microsoft Store for Education has been postponed. We will update this notice when a new retirement date is announced. You can continue to use the current capabilities of free apps until that time. For more information about this change, see **Update to Intune integration with the Microsoft Store on Windows** ↗ and **FAQ: Supporting Microsoft Store experiences on managed devices** ↗ .

ⓘ Important

Starting on April 14th, 2021, only free apps will be available in Microsoft Store for Business and Education. For more information, see **Microsoft Store for Business and Education.**

https://learn.microsoft.com
https://aka.ms/StoreTransition

65

New: Microsoft Store on Windows

- Microsoft Store for Business will Retire (Q1 2023)
- A new Microsoft Store on Windows 10 / 11 is released (H2 2022)
- Always latest application version
- Support for **Windows Package Manager (Winget)**
  - (similar like Chocolatey)
  - Command-line utility

https://aka.ms/NewStore

66

66

MSfB compared to MSoW

- Windows Package Manager integration
- Open set of API's that can integrate with any UEM Solution
  - (Unified endpoint management)
  - Of course also Intune ☺
- Backend = Windows Package Manager Framework
- FrontEnd = WinGet client (Command-Line Tool)
- Software added by Microsoft or any other ISV
- Not only UWP, but many other packages supported
- New Apps > <u>Not</u> in the Microsoft Store on local device

67

67
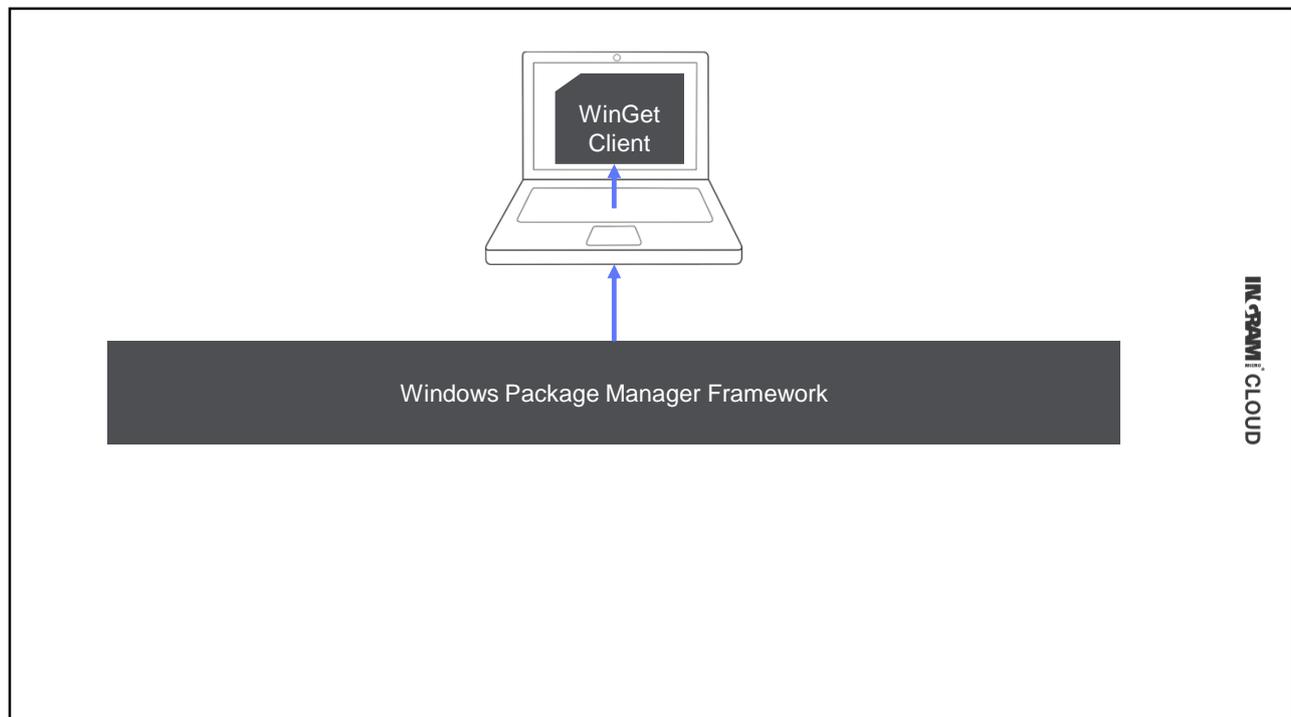
68

Windows Package Manager

- Announced in May, 2020 in Preview

- First version released in May, 2021

- Automation process of getting software on your Windows PC
  - Application Discovery
  - Application Installation
  - Application Update

- <u>Repository</u> of Trusted Applications

- API's

- UEM Integration

69

69

Winget Software Package

Manifest	Application Software	Sources (Stores)
• YAML files • Containing Metadata • Describes the Installation	• Universal Windows Platform (UWP) • Progressive Web Apps (PWA) • MSIX • Win-32 (. Msi , setup.exe)	• **Msstore**: Microsoft Store • **Winget**: Community Repository • Private Source

70

70
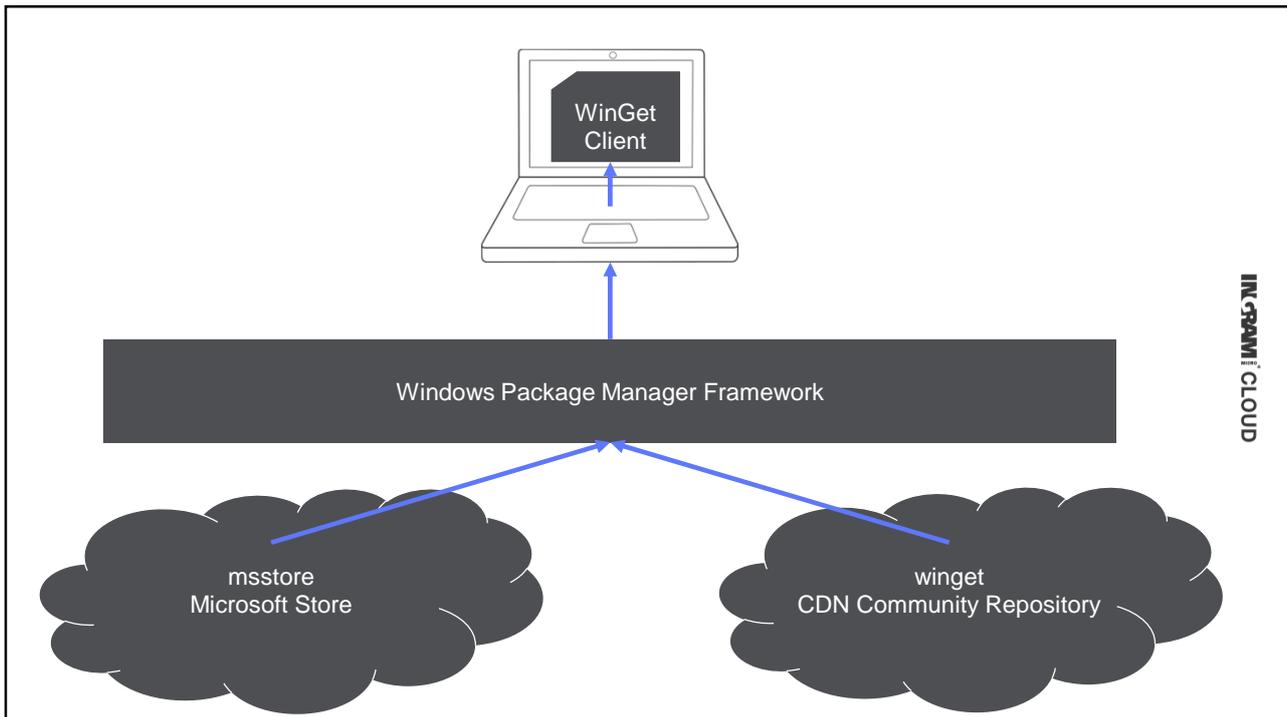
71

WinGet Client

- Part of Windows Operating System from Windows 11 22H2

- Distributed within the **App Installer** package
  - On Windows 11
  - On Windows 10 (Windows 10 1809 or later)

- Distributed as **msixbundle package**
  - https://aka.ms/getwinget

- Winget is a Command-line driven package installer

```
C:\Windows>winget
AppInstaller Command Line v1.0.41061.0
Copyright (c) Microsoft Corporation

AppInstaller command line utility enables installing applications from the command line.
```

72

72

WinGet Client : Notes

- It may take a few days to get the updated App Installer

- Manually Update :
  - You need to install VC++ v14 Desktop Framework Package
  - Only necessary on older builds of Windows 10

73

Commands

Winget source list

```
C:\Users\belend00>winget source list
Name     Argument
------------------------------------------------------------
msstore  https://storeedgefd.dsx.mp.microsoft.com/v9.0
winget   https://cdn.winget.microsoft.com/cache
```

Known Sources (Repositories)

74

Commands

`Winget search`

Search Application + Id

```
C:\>winget search blender
Name                                          Id                Version Source
-------------------------------------------------------------------------------
Blender                                       9PP3C07GTVRH      Unknown msstore
Blender 2.93 LTS                              9N9DWD5GKD3V      Unknown msstore
Blender 3.3 LTS                               9N1SLK9R16TW      Unknown msstore
Blender 2.83 LTS                              9NDC4WK85MS6      Unknown msstore
Ultimate Photo Blender / Mixer                9NHT9NJG3849      Unknown msstore
Fused : Double Exposure, Video and Photo Blender 9NBLGGH1JJ6D  Unknown msstore
Photo Blender Camera                          9NBLGGH6CRW5      Unknown msstore
Photo Blender : Photo Editor                  9P1VP6V0SKCL      Unknown msstore
Overlays and Photo Blender                    9NS6Q06D2RR5      Unknown msstore
Video Blender and Photo Blender Mixer         9NBLGGH4WWGN      Unknown msstore
Photo Blender TB                              9NBLGGH4QPMR      Unknown msstore
Converting Colors - Color Blender             9N8L8W5TTD6S      Unknown msstore
Blender                                       BlenderFoundation.Blender 3.5.0   winget
```

75

Commands

`Winget install {application}`

```
C:\>winget install blender
Multiple packages found matching input criteria. Please refine the input.
Name    Id                       Source
----------------------------------------
Blender 9PP3C07GTVRH             msstore
Blender BlenderFoundation.Blender winget

C:\>winget install blender --source msstore
Found Blender [9PP3C07GTVRH] Version Unknown
This package is provided through Microsoft Store. winget may need to acquire the package from Microsoft Store on behalf
of the current user.
Agreements for Blender [9PP3C07GTVRH] Version Unknown
Version: Unknown
Publisher: Blender Foundation
```

Install Application

76

Commands

Winget list

```
C:\>winget list
Name                            Id                              Version
-------------------------------------------------------------------------------
AttackIQAgent (remove only)     AttackIQAgent                   3.7.25.0
Blender                         9PP3C07GTVRH                    3.5.1.0
Microsoft Edge                  Microsoft.Edge                  112.0.1722.58
Microsoft Edge Update           Microsoft Edge Update           1.3.173.55
Microsoft Edge WebView2 Runtime Microsoft.EdgeWebView2Runtime   112.0.1722.58
Cortana                         Microsoft.549981C3F5F10_8wekyb3d8bbwe 4.2204.13303.0
```

List Installed Applications

77

Commands

Winget show

```
C:\>winget show notepad++ --versions
Found Notepad++ [Notepad++.Notepad++]
Version
-------
8.5.2
8.5.1
8.5
8.4.9
8.4.8
8.4.7
8.4.6
8.4.5
8.4.4
```

Show Available Application versions

78

Commands

Winget upgrade

Winget uninstall

79

Commands

Winget --info

```
C:\>winget --info
Windows Package Manager v1.4.10173
Copyright (c) Microsoft Corporation. All rights reserved.

Windows: Windows.Desktop v10.0.19043.2364
System Architecture: X64
Package: Microsoft.DesktopAppInstaller v1.19.10173.0

Logs: %LOCALAPPDATA%\Packages\Microsoft.DesktopAppInstaller_8wekyb3d8bbwe\LocalState\DiagOutputDir

User Settings: %LOCALAPPDATA%\Packages\Microsoft.DesktopAppInstaller_8wekyb3d8bbwe\LocalState\settings.json

Links
--------------------------------------------------------------------
Privacy Statement     https://aka.ms/winget-privacy
License Agreement     https://aka.ms/winget-license
Third Party Notices   https://aka.ms/winget-3rdPartyNotice
Homepage              https://aka.ms/winget
Windows Store Terms   https://www.microsoft.com/en-us/storedocs/terms-of-sale
```

80
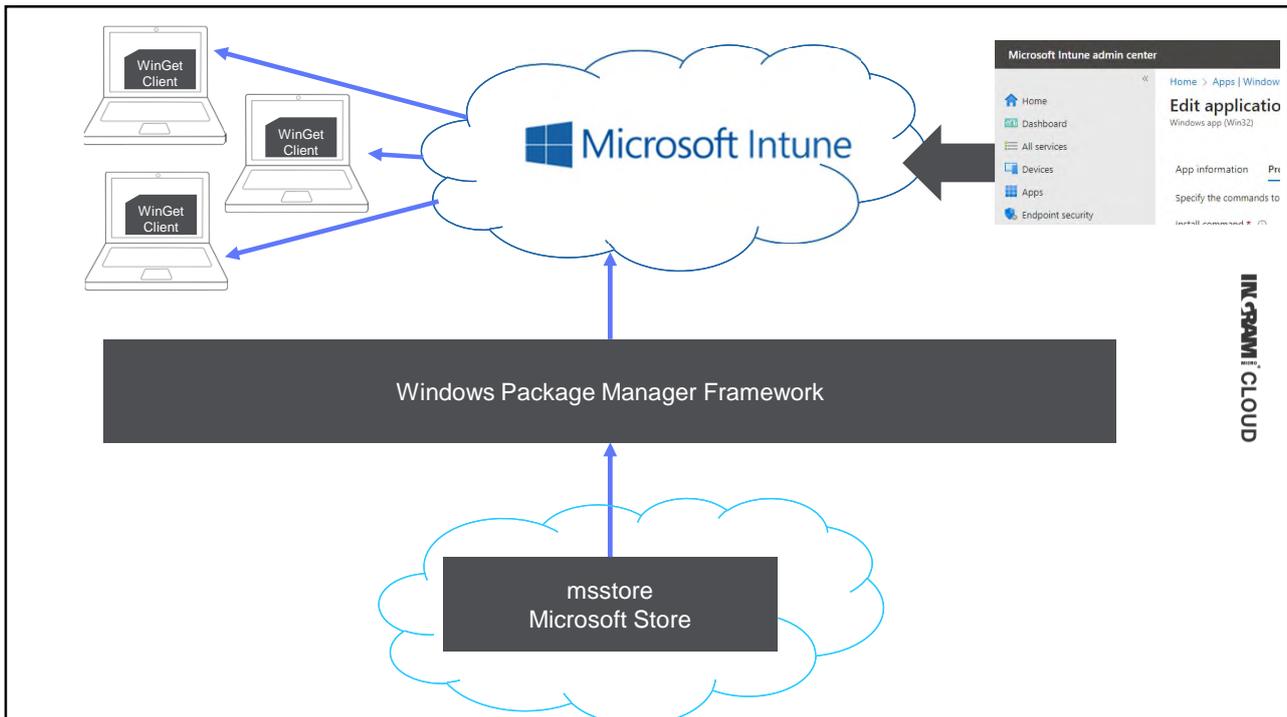
81

Microsoft Intune + MSoW

- Backend = Microsoft Intune Admin Center
- FrontEnd = WinGet client (API) + Company Portal

82

Company Portal

Company Portal is the Private Store for installable Company applications

83

Microsoft Store app (new)   11-2022

84

Microsoft Intune integration

Microsoft Store on Windows

Microsoft Store for Business

85

85

Microsoft Store app (new)

Package Identifier

System

86

Winget search adobe

```
Name                                        Id                      Version       Match        Source
----------------------------------------------------------------------------------------------------------
Adobe Express                               9P94LH3Q1CP5            Unknown                     msstore
Adobe Lightroom                             9PNLG4ZG0XGJ            Unknown                     msstore
Adobe Acrobat Reader DC                     XPDP273C0XHQH2          Unknown                     msstore
Adobe Fresco                                XP8C8R0ZKZR27V          Unknown                     msstore
Adobe Creative Cloud                        XPDLPKWG9SW2WD          Unknown                     msstore
Adobe Photoshop Express                     9WZDNCRFJ27N            Unknown                     msstore
Adobe Experience Manager Forms              9ND12RLXTGTT            Unknown                     msstore
Adobe Content Viewer                        9WZDNCRFJBZ1            Unknown                     msstore
Adobe Photoshop Express Toshiba version only 9WZDNCRDFSG4          Unknown                     msstore
Adobe Premiere Elements 2023                XP8JR4WQQRJMHT          Unknown                     msstore
Avocode                                     Avocode.Avocode         4.15.6        Tag: adobe   winget
Adobe Acrobat Reader DC (64-bit)            Adobe.Acrobat.Reader.64-bit 23.001.20143 Tag: adobe winget
Adobe Acrobat Reader DC                     Adobe.Acrobat.Reader.32-bit 23.001.20143 Tag: adobe winget
Adobe DNG Converter                         Adobe.DNGConverter      15.0.0                      winget
Cryptr                                      Adobe.Cryptr            0.5.0                       winget
Brackets                                    Adobe.Brackets          1.14.17770                  winget
Adobe Connect                               Adobe.AdobeConnect      21.11.22                    winget
```

87

88
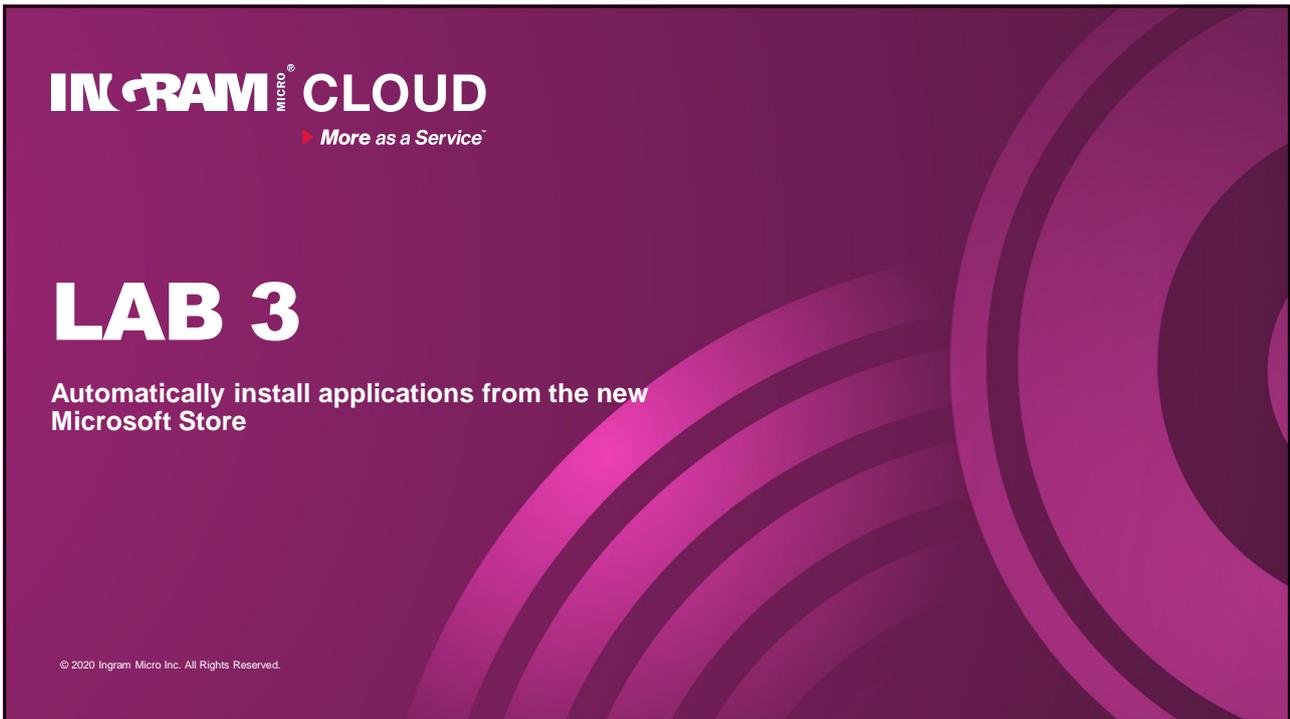
INGRAM MICRO® CLOUD
▶ *More as a Service*

LAB 3

Automatically install applications from the new Microsoft Store

89

Module 4 :

Configure Device Restrictions and Security Policies

INGRAM® CLOUD

90

90

A standard On-Premise installation
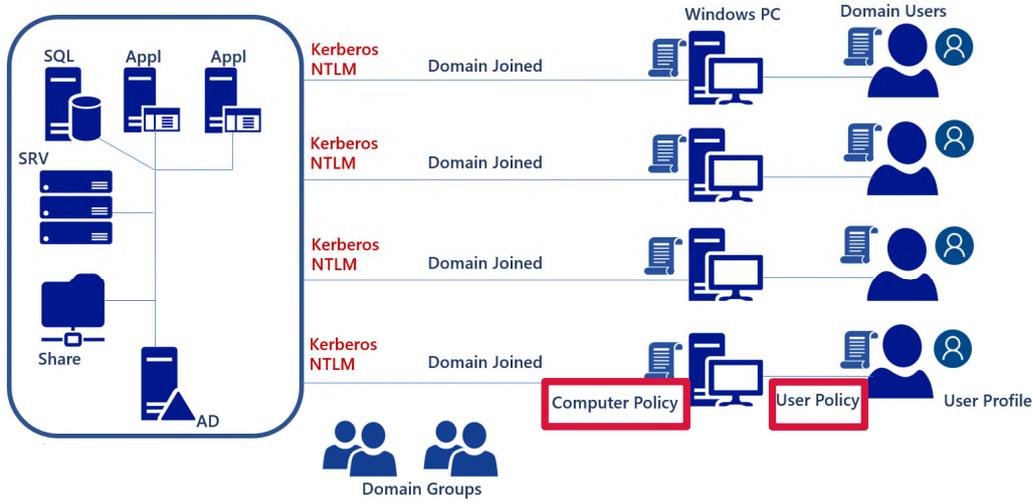
91

Device restrictions in a Domain
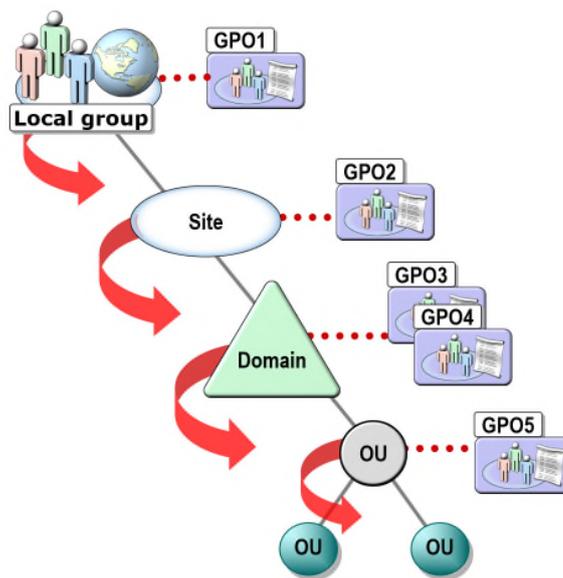
92

Device Restrictions in Intune

Intune > Device Configuration > Profiles

93

Import personal ADMX-templates

Intune > Device Configuration > Profiles > Custom

94

Endpoint Protection Profile

Intune > Device Configuration > Profiles > Endpoint Protection

© 2020 Ingram Micro Inc. All Rights Reserved.

95

95

Security Baselines

Intune > Device Security > Security Baselines

Help to make your devices secure with Security Baseline Policies

MDM Security Baseline : https://docs.microsoft.com/en-us/windows/client-management/mdm/

© 2020 Ingram Micro Inc. All Rights Reserved.

96

96
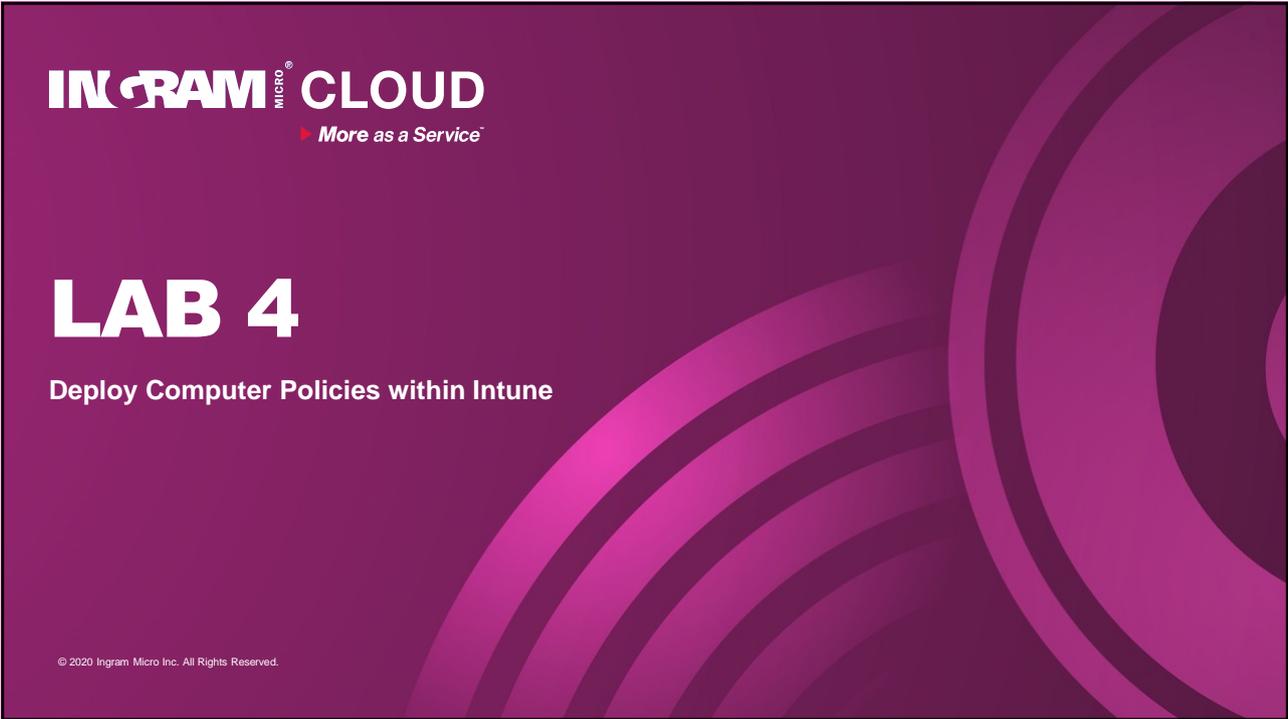
INGRAM MICRO® **CLOUD**
▶ *More as a Service*™

LAB 4

Deploy Computer Policies within Intune

97

Module 5 :

Modern Roaming Profiles

INGRAM CLOUD

98

98

Standard Roaming Profiles

99

Modern Roaming Profiles

Windows 10 PC1   Windows 10 PC2
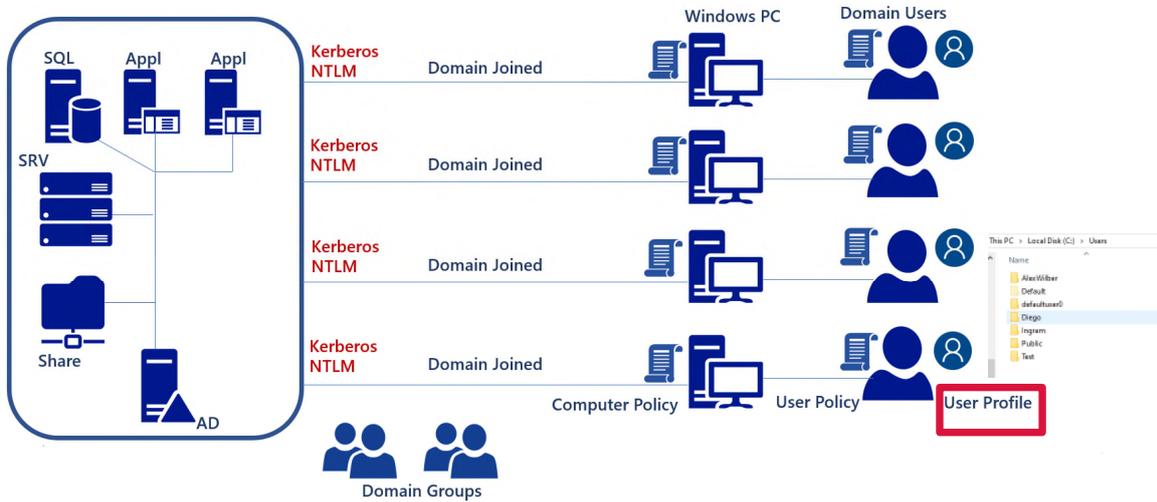
ESR KFM UE-V

Roaming Item	Roaming Solution	Storage
Common Windows 10 Items	Enterprise State Roaming (ESR)	Azure Active Directory
Modern Shell Items	Enterprise State Roaming (ESR)	Azure Active Directory
UWP App Settings	Enterprise State Roaming (ESR)	Azure Active Directory
Desktop Items, My Documents	Known Folder Move (KFM)	OneDrive for Business
Legacy Shell Items	User Experience Virtualization (UE-V)	OneDrive for Business
Win32 App Settings	User Experience Virtualization (UE-V)	OneDrive for Business

100

Enterprise State Roaming (ESR)

- **Azure AD Premium Subscription**
- **Azure Active Directory > Devices > Enterprise State Roaming**
- Securely synchronize user settings
- Synchronize application setting
- What is synchronized ?
  - App Data (Roaming directory)
  - Themes
  - Internet Explorer
  - Microsoft Edge
  - Passwords
  - Language preferences
  - Ease of access features
  - Control Panel
  - Windows Settings

Enterprise State Roaming (ESR)

Azure AD Premium

Settings Roaming...
- Themes
- IE / Edge Settings
- Control Panel
- Other Windows Settings
- Application Settings (UWA)

101

101

Known Folder Move (KFM)

- KFM is a OneDrive sync feature that works with Windows 10
- This feature allows business users to backup/redirect their Windows Folders:
  - Desktop
  - Documents
  - Pictures
- to OneDrive for Business.

Desktop 500 MB

Documents 500 MB

Pictures 1.5 GB
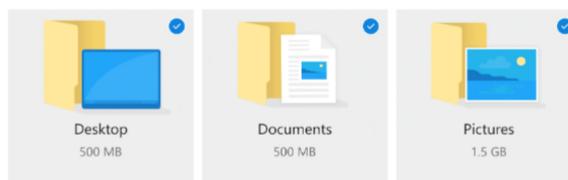
Remaining space in OneDrive: 2.5 GB

Start protection

102

102

User Experience Virtualization (UE-V)

- A feature of Windows 10 Enterprise
- When also Legacy Applications are installed on the PC's
- Synchronization based on OneDrive or File Server
- Roam Application Settings for Win32 Applications
  - Some Applications have an own synchronization mechanism (example Google Chrome)
- Enabled with a PowerShell script

CLOUD

103

103

INGRAM MICRO® CLOUD
▶ *More as a Service*

LAB 5

Modern Roaming Profiles

104

Module 6 :

Install WIN32 Applications with Intune

Winget

105

105

Deploy LOB Applications on Devices

106

106

Before 2018 ... After 2018

In the Past

Mobile MSI

PowerShell Scripts

Limited to single file MSI for Win32 apps

Challenge for customers to deploy complex Windows apps

What's New

Mobile MSI

PowerShell Scripts

MSI, EXE, MSP
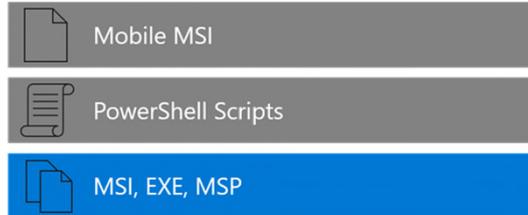
✔ Leverage MSIX packaging tool to convert your existing Win32 apps to MSIX

✔ Use new Intune capability to directly deploy Win32 apps (MSI, EXE and MSP/MST)

107

107

Deploy Applications with Intune

- Windows 10 Store Applications
- MSI – MSIX installations
- EXE files cannot be published directly
- EXE files need to be "wrapped" into an .INTUNEWIN file

INTUNEWIN
WIN32 APP PACKAGING
DONE RIGHT

108

108

109
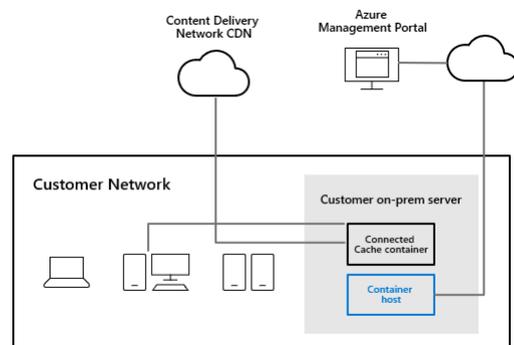
110

App Assignment & Monitoring

App Assignment
- Required
- Available
- Uninstall
- Rich targeting (include/exclude)

Monitoring
- Aligns with Intune app reporting

111
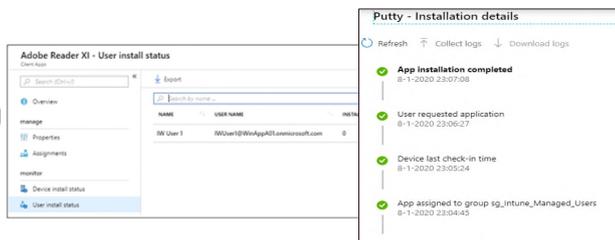
What is MSIX

MSIX is a Windows app package format

Provides a modern packaging experience for all kinds of Windows applications.

Modern packaging and deployment features to Win32, WPF, and WinForm apps.

Existing applications can be converted into MSIX packages

MSIX packaging tool can be found in Microsoft Store.

112

Application Packaging challenges

Windows software packaging can be a time-consuming experience

Engineers spend hours deploying Windows software manually

Traditional tools are complex & ineffective

Software installers are messy

Software management is like the Wild West

System Context <> User Context

Application Updates

Finding Install /uninstall switches is difficult

113

Winget & Intune integration

Packages are maintained centrally by the ISV Publisher of the Package

Installation Integration directly in Andpoint Manager Admin Center

ISV app locations

https://aka.ms/StoreTransition

114
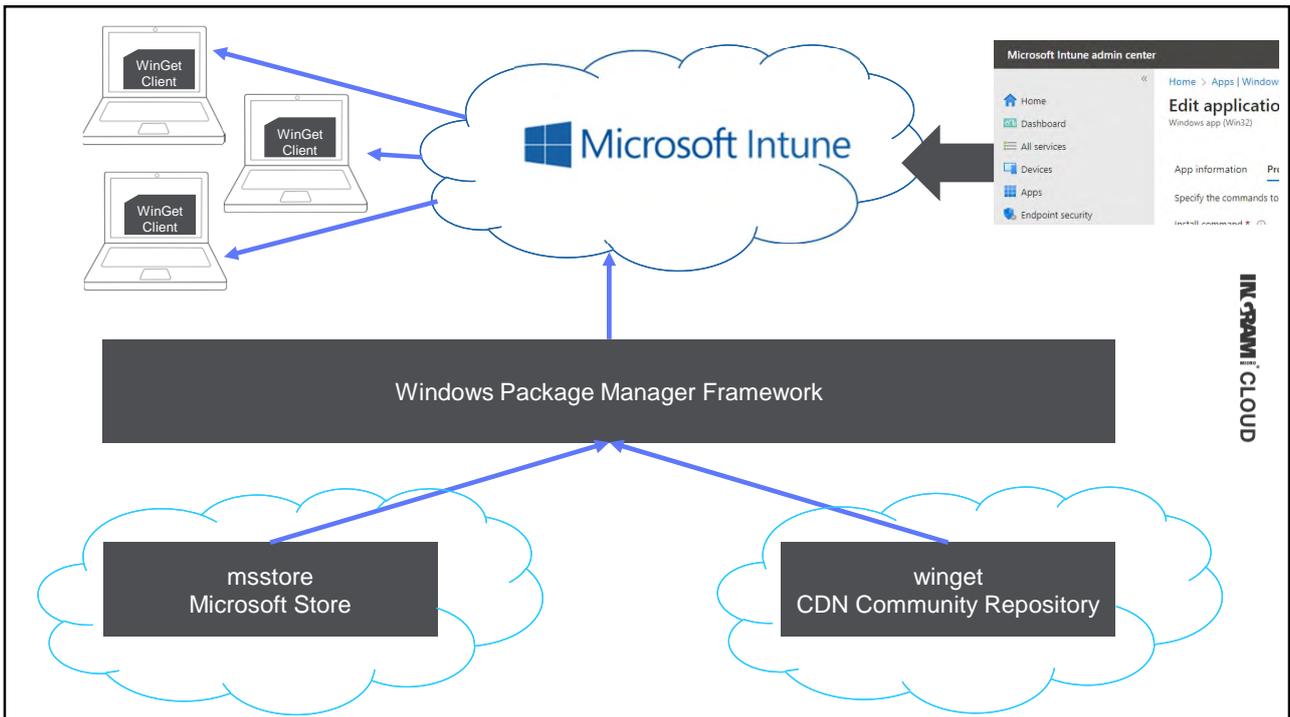
115

1. Create an empty IntuneWin Application

IntuneWinAppUtil

Folder with empty.txt

dummy.intunewin

```
C:\INTUNE\input>IntuneWinAppUtil.exe
Please specify the source folder: c:\intune\input
Please specify the setup file: empty.txt
Please specify the output folder: c:\intune\output
Do you want to specify catalog folder (Y/N)?N
INFO    Validating parameters
INFO    Validated parameters within 15 milliseconds
```

https://github.com/Microsoft/Microsoft-Win32-Content-Prep-Tool

116

116

2. Publish dummy.intunewin as win32 app

117

3. Launch winget install command

118

What is Chocolatey ?

Chocolatey is a software package management solution

Is an Open Source project

Chocolatey simplifies the packaging by using a Universal Packaging format

Write Once, Deploy Anywhere

Installs on Windows 7 + , Windows 2003 +

Install on Windows Docker Containers

Integrates perfectly in Intune

https://www.chocolatey.org

119

119

Chocolatey Community

https://www.chocolatey.org

https://www.chocolatey.org/packages

Community package repository

9750 Community Maintained Packages

Community maintained

Everything goes through VirusTotal

120

120

Chocolatey with Intune

1. Create an Chocolatey Agent INTUNEWIN Package
2. Add the Package to the Intune Portal
3. Install the Chocolatey Agent Software
4. Deploy the other needed software

```
1  $localprograms = choco list --localonly
2  if ($localprograms -like "*firefox*")
3  {
4      choco upgrade firefox -y
5  }
6  Else
7  {
8      choco install firefox -y
9  }
```

https://www.thelazyadministrator.com/2020/02/05/intune-chocolatey-a-match-made-in-heaven/

CLOUD

121

121

LAB 6

Install WIN32 applications with Intune & Winget

122

Module 7 :

Conditional Access and Device Compliance

123

123

Device Compliance

Intune > Device Compliance

devices must meet some Device Compliance Settings

0 Devices selected (100 max)

Device name	Managed by	Ownership	Compliance	OS	OS version
DESKTOP-H2SH332	MDM	Corporate	✓ Compliant	Windows	10.0.18363.592
DESKTOP-L8N3TD7	MDM	Corporate	✓ Compliant	Windows	10.0.18363.592
DESKTOP-LBIB7UL	MDM	Corporate	✓ Compliant	Windows	10.0.18363.592

124

124

Device Compliance Policy

Settings
- Define Device minimum requirements
- (OS version, Password, Antivirus, Firewall,Encryption, ATP, ...)

Actions
- Define Action if device Not Compliant
- (Email User, Lock Device, Mark, ...)

Scope
- Define Devices where this policy applies

125
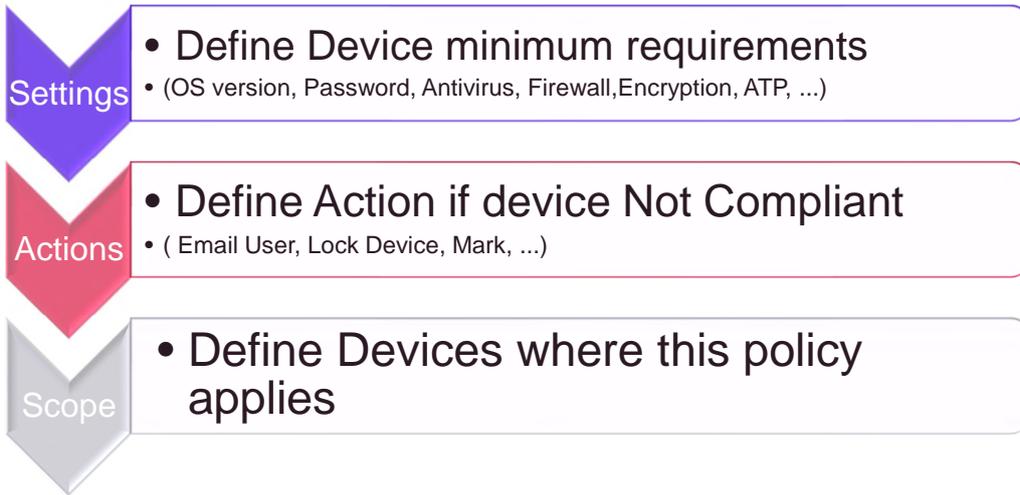
125

Device Compliance + Conditional Access

126
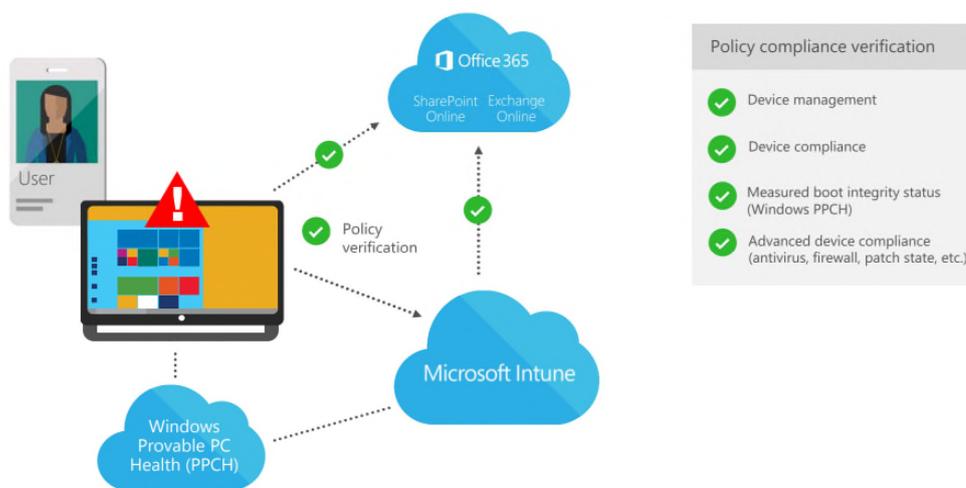
126

What is Conditional Access
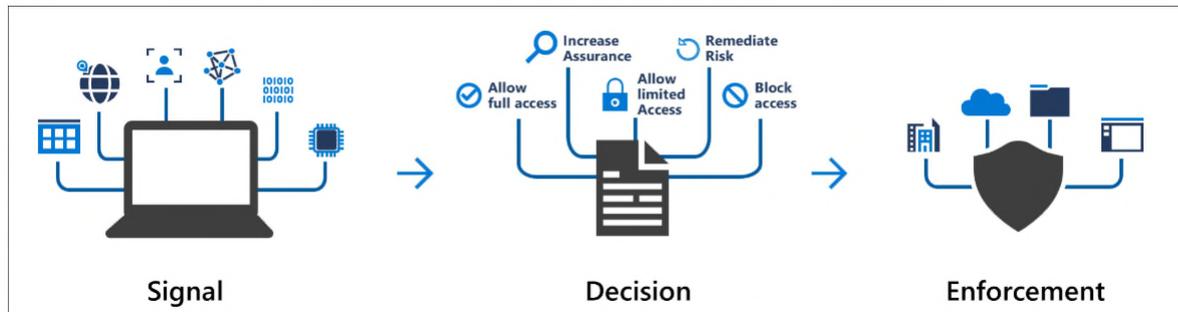
127

Common Signals

- User or group membership
- IP Location information
- entire countries IP ranges
- Devices of specific platforms
- Devices marked with a specific state
- Users attempting to access specific
- Real-time and calculated risk detection
- Microsoft Cloud App Security (MCAS)
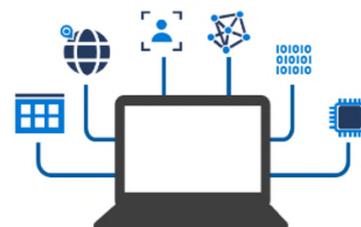
Signal

128

Common Decisions

- Block access
  - Most restrictive decision
- Grant access
  - Least restrictive decision, can still require one or more of the following options:
    - Require multi-factor authentication (MFA)
    - Require device to be marked as compliant
    - Require Hybrid Azure AD joined device
    - Require approved client app
    - Require app protection policy (preview)

Decision

129
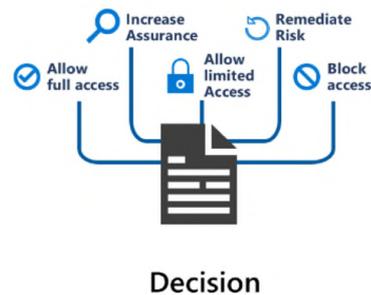
129

Common Enforcement Policies

- Requiring multi-factor authentication for users with administrative roles
- Requiring multi-factor authentication for Azure management tasks
- Blocking sign-ins for users attempting to use legacy authentication protocols
- Requiring trusted locations for Azure Multi-Factor Authentication registration
- Blocking or granting access from specific locations
- Blocking risky sign-in behaviors
- Requiring organization-managed devices for specific applications

Enforcement

130

130

Conditional Access : total picture
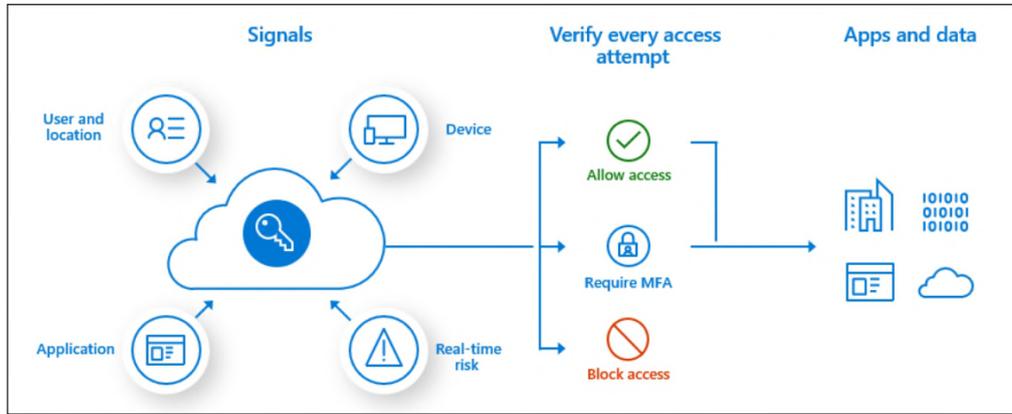
131

LAB 7

Creating Compliance and Conditional Access Policies

132
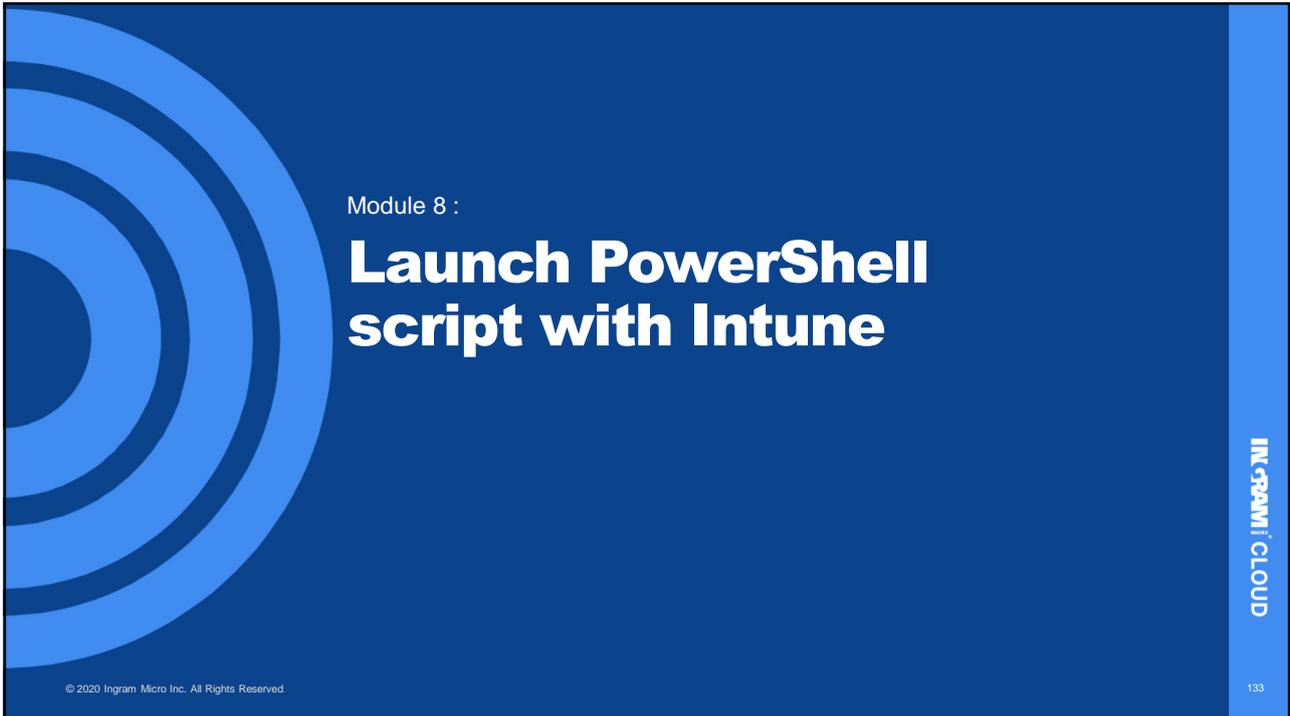
Module 8 :

Launch PowerShell script with Intune

INGRAM CLOUD

133

133
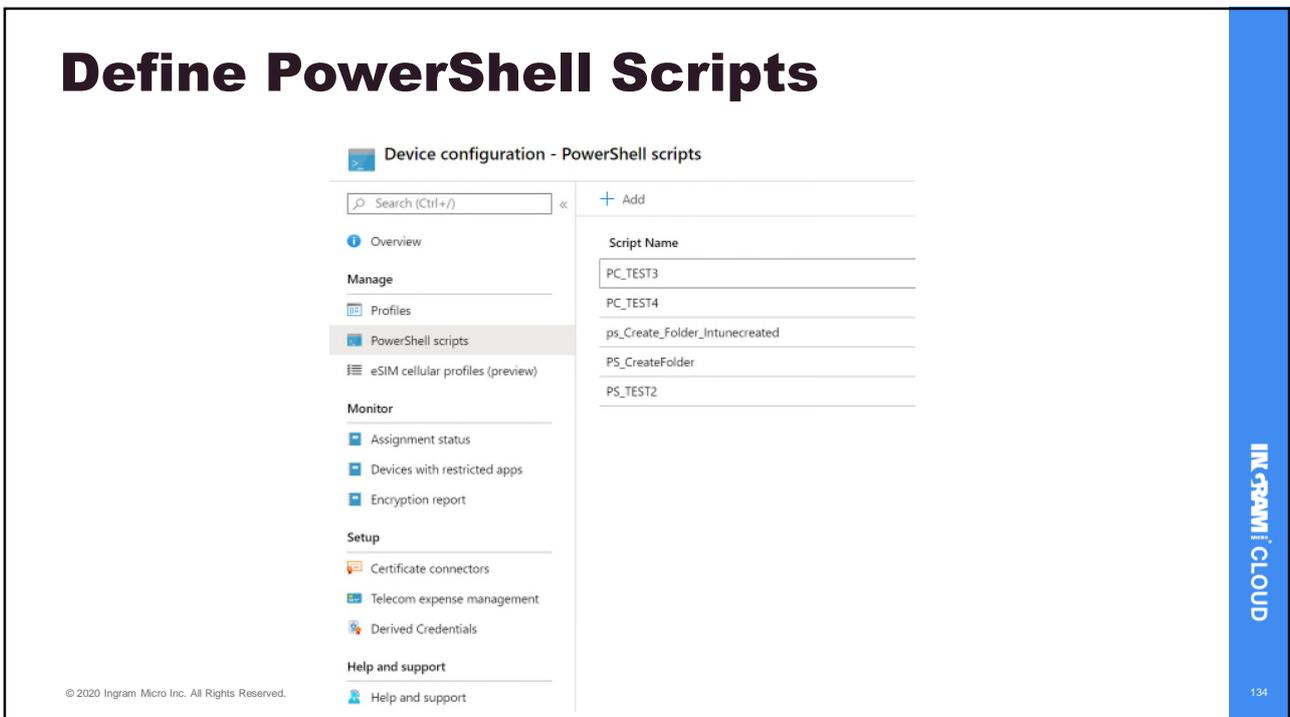
Define PowerShell Scripts

Device configuration - PowerShell scripts

Search (Ctrl+/)   + Add

Overview   Script Name

Manage   PC_TEST3

Profiles   PC_TEST4

PowerShell scripts   ps_Create_Folder_Intunecreated

eSIM cellular profiles (preview)   PS_CreateFolder

Monitor   PS_TEST2

Assignment status

Devices with restricted apps

Encryption report

Setup

Certificate connectors

Telecom expense management

Derived Credentials

Help and support

Help and support

INGRAM CLOUD

134

134

PowerShell script settings

Add PowerShell script ...

✅ Basics 2️⃣ Script settings ③ Assignments ④ Review + add

Script location * ⓘ [Select a file] 📁

Run this script using the logged on credentials ⓘ (Yes **No**)

Enforce script signature check ⓘ (Yes **No**)

Run script in 64 bit PowerShell Host ⓘ (Yes **No**)

User Context
(run with user credentials)

System Context

135

135

Verify Installation Status

Created: : 01/10/20, 01:27:29 PM 📋   Assigned : Yes
Last Modified: : 01/10/20, 01:27:29 PM   Groups assigned: : 1

Status for checked-in devices
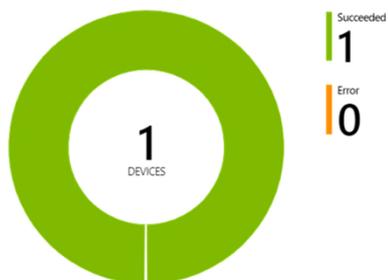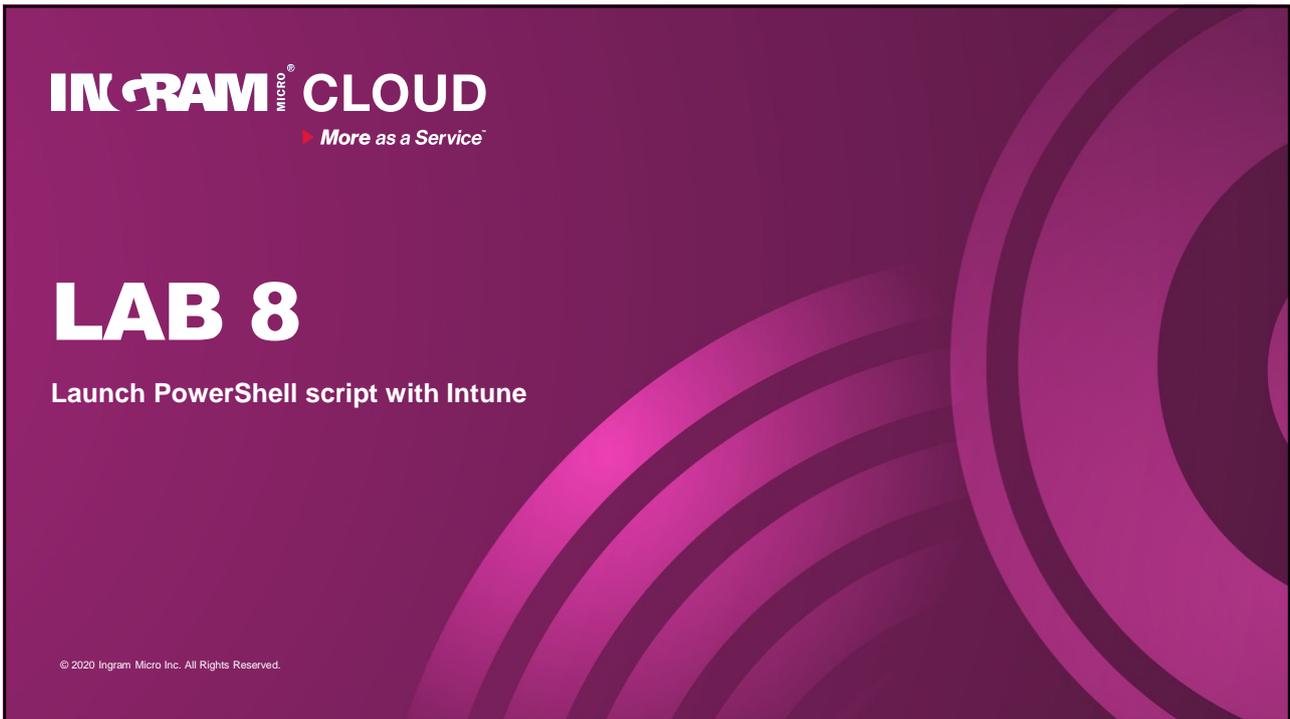
1
DEVICES

Succeeded
1

Error
0

136

136

LAB 8

Launch PowerShell script with Intune

137

Module 9 :

The new developments in Microsoft Endpoint Manager

138

138

Remote Help (GA : 05/04/2022)

- Remote Assistant Tool from Microsoft
- Taking over the screen of another User (compare it with TeamViewer)

https://techcommunity.microsoft.com/t5/microsoft-endpoint-manager-blog/remote-help-enterprise-grade-assistance-tool-now-available/ba-p/3275792

© 2020 Ingram Micro Inc. All Rights Reserved.

139

139

1. Enable Remote Help on Tenant Level

http://endpoint.Microsoft.com > Tenant Administration > Remote Help

© 2020 Ingram Micro Inc. All Rights Reserved.

140

140

2. Install Remote Client on PC Operator

http://aka.ms/DownloadRemoteHelp

141

141

3. Install Remote Client on Devices

http://aka.ms/DownloadRemoteHelp

Make an IntuneWin application

https://docs.microsoft.com/en-us/mem/intune/remote-actions/remote-help#install-and-update-remote-help

More Info

http://aka.ms/remotehelp

142

142

Baseline Policy replacement

- Feb 29th 2020 : Microsoft will remove the "baseline policies" from Azure AD
  - Intune > Conditional Access > Policies

- AAD Security Defaults is a good replacement
  - AAD > Properties > Security Defaults

143

143

Policies for Office Apps

- Same info as https://config.office.com
- ADMX Based Policies
  - Only for Intune Managed Devices
  - Computer & User Policies
  - Will win over Policies for Office Apps (if overlapping)
- Policies for Office Apps
  - Applies to
    - Domain Joined Devices
    - AAD Joined Devices
    - Devices in Workgroup
  - User Policies only
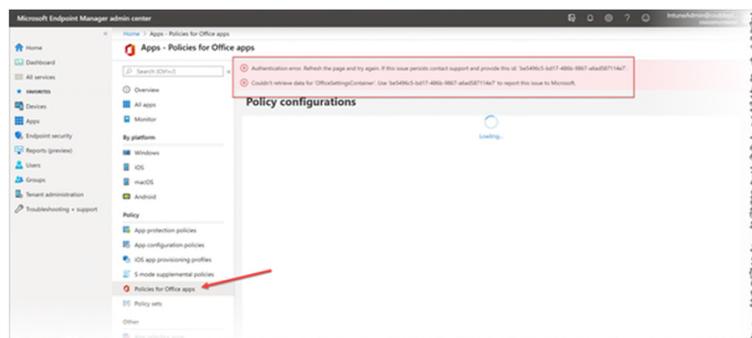
144

144

Intune Policy Sets

- Assignable Collection of apps, policies, and other managemnet object

- By creating a policy set, you can group the following features into a set which you can assign to either device or user groups:
  - Apps
  - App configuration policies
  - App protection policies
  - Device configuration profiles
  - Device compliance policies
  - Device type restrictions
  - Windows autopilot deployment profiles
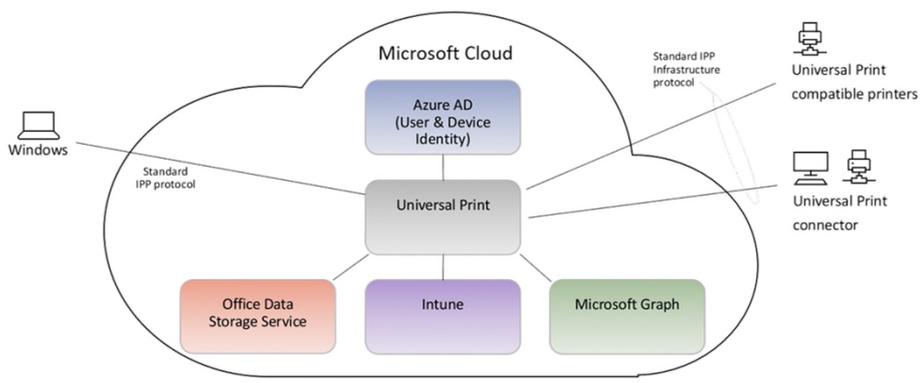 - Enrollment status page

https://docs.microsoft.com/en-us/mem/intune/fundamentals/policy-sets
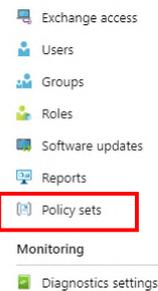
145

Universal Print

Available in Private Preview Only

146

Microsoft 365 Lighthouse

As an MSP, manage the Devices of multiple customers (Tenants) from one portal

https://aka.ms/LighthouseNextStep

147

147
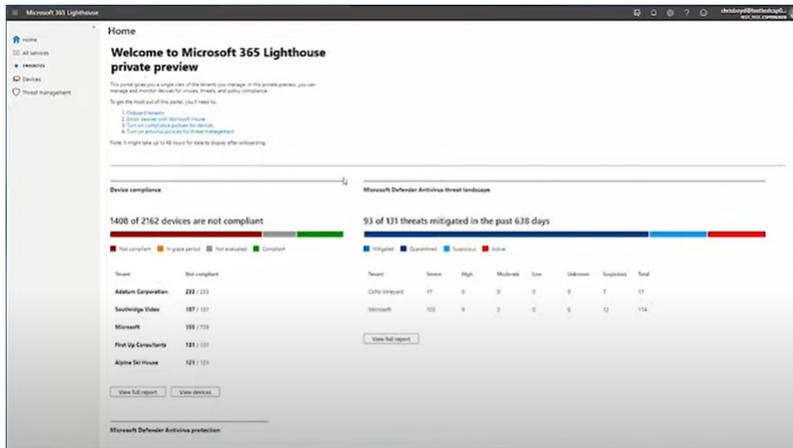
Key Requirements for M365 Lighthouse

Customers need to have devices enrolled to light up device compliance and anti-virus user stories.

Have established Delegated Access Permissions (DAP) for each customer with global admin permissions.

148

148

Wrap Up

- **What is Microsoft Endpoint Manager**
- **Getting Started with Microsoft Intune**
- **Windows Autopilot with Intune**
- **Deploy Applications from Store**
- **Device Restrictions & Policies**
- **Modern Roaming Profiles**
- **Install WIN32 Applications**
- **Conditional Access**
- **Install Powershell script with Intune**
- **New Developments**

INGRAM CLOUD

149

149