

Microsoft Intune Administration

*Learning Intune concepts and
migrating endpoint devices from SCCM*

Manish Bangia



www.bpbonline.com

First Edition 2024

Copyright © BPB Publications, India

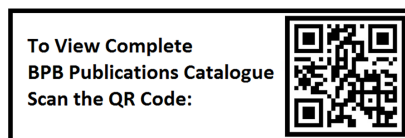
ISBN: 978-93-55519-696

All Rights Reserved. No part of this publication may be reproduced, distributed or transmitted in any form or by any means or stored in a database or retrieval system, without the prior written permission of the publisher with the exception to the program listings which may be entered, stored and executed in a computer system, but they can not be reproduced by the means of publication, photocopy, recording, or by any electronic and mechanical means.

LIMITS OF LIABILITY AND DISCLAIMER OF WARRANTY

The information contained in this book is true to correct and the best of author's and publisher's knowledge. The author has made every effort to ensure the accuracy of these publications, but publisher cannot be held responsible for any loss or damage arising from any information in this book.

All trademarks referred to in the book are acknowledged as properties of their respective owners but BPB Publications cannot guarantee the accuracy of this information.



Dedicated to

My wife and lifeline:

Seema

and

*two lovely kids: **Divyansh** and **Yuvaan***

About the Author

Manish Bangia has 20+ years of experience as a professional. He has expertise in various technologies such as Intune, Configuration Manager and other technologies related to Windows Device Management. Based on all his contributions to technical communities worldwide, he has been awarded by Microsoft as Most Valuable Professional (MVP). He is an avid blogger and youtuber, writing blogs and publishing videos related to technology.

He is passionate about making content easy to understand which has been liked by many people. Additionally, he deep dives into the technology to understand behind the scenes and shares the information with the community through blogs, videos, LinkedIn / Facebook groups.

About the Reviewers

- ❖ **Ellis Barrett** is the Modern Workplace Team Lead at OneAdvanced, specializing in Microsoft Endpoint Manager and its associated technologies. He assists organizations in navigating the complexity of Intune, maintaining a highly secure environment that provides a great user experience. He produces efficient, scalable and easily maintainable scripts to leverage Microsoft Cloud technologies and ensure clients get the most value out of their investments.
- ❖ **Shubham Chauhan** is a seasoned IT professional with a B.Tech degree in Electronics and Communication from the College of Technology, Pantnagar. Specializing in system administration and endpoint management, he excels in maintaining IT infrastructure stability and security. Shubham is proficient in software deployment, OS management, and troubleshooting, with a strong focus on PowerShell automation for enhancing operational efficiency.

He has extensive experience with Windows, MacOS, iOS, and Linux administration, as well as Terraform for infrastructure provisioning and Azure VDI management. As a main stakeholder in creating and enforcing system policies, Shubham collaborates closely with security teams to safeguard IT infrastructure. He also shares his expertise by training individuals on these technologies, driving excellence in the IT landscape.

Outside of his professional life, Shubham enjoys playing guitar, videography, and staying active at the gym.

- ❖ **Sukhdeep Singh Saini** is a highly accomplished solutions architect specializing in Microsoft technologies, with over 11 years of experience delivering exceptional results in enterprise application architecture and cloud technologies, including AWS and GCP. He is an expert in automation, leveraging PowerShell and Python to streamline processes and enhance efficiency. His proven track record includes successful migrations to Windows 11 and the seamless management of Citrix environments. Sukhdeep's deep understanding of Microsoft technologies, such as Intune, SCCM, Office 365, and Azure, combined with his expertise in Google Cloud Platform (GCP), including Chrome Browser Cloud Management (CBCM), and DEX technologies such as Systrax and ServiceNow DEX, make him a valuable asset in driving innovation and achieving organizational goals.

- ❖ **Usman Lodhi** has been a Microsoft Certified Trainer (MCT) since 2013 and assumed the role of MCT Regional Lead in January 2022. His expertise spans Microsoft 365, Intune, and Azure, areas in which he passionately shares his knowledge and training experience with the community. Usman is committed to nurturing the growth of aspiring IT professionals by conducting engaging training sessions and contributing actively to their development.

As a Microsoft Learn Expert, Usman Lodhi excels in crafting effective learning environments that cater to diverse learners' needs. His approach combines technical depth with practical insights, empowering individuals to harness the full potential of Microsoft technologies. Beyond training, Usman advocates for continuous learning and professional advancement, fostering a culture of innovation within the IT community.

Usman Lodhi's impact extends beyond his immediate role, influencing the broader landscape of IT education and skill development. Through his dedication and expertise, he continues to inspire and equip individuals to succeed in the dynamic field of technology.

Acknowledgement

This book is dedicated to my lifeline and my wife Seema Bangia, without her great support this would not have been possible. Through her continuous support and encouragement, I was able to focus more on writing while she was focusing on daily task, taking care of the kids and doing my part of the work which supposedly I was responsible for. Her inspiration was the energy for me to get going.

I would also dedicate this book to my sons Divyansh Bangia and Yuvaan Bangia who understood my situation and did not complain too much when I was focusing on writing the book. They lost a great quality time with their father but they knew the importance of this mile stone.

I am dedicating this book to my parents, my mother Kamal Bangia, who is no longer with me today but her memories stay forever. My father, Mahinder Kumar Bangia, whose challenges in his life has taught me: when the going gets tough, the tough gets going.

I am also grateful to BPB Publications for their guidance and expertise in bringing this book to fruition. It was a long journey of revising this book, with valuable participation and collaboration of reviewers, technical experts, and editors.

I would also like to acknowledge the valuable contributions of my colleagues and co-worker during many years working in the tech industry, who have taught me so much and provided valuable feedback on my work.

Finally, I would like to thank all the readers who have taken an interest in my book and for their support in making it a reality. Your encouragement has been invaluable

Preface

Writing a book, by keeping in mind about the readers expectation and understanding is not easy. The book can include thousands of pages with lots of information captured, but it will not be of any use if it is not helping the readers in a strategical way.

There can be so many challenges for various readers such as, a fresher who wants to start building their skill in Intune and device management technology, an existing IT person who is still working on on-premises infrastructure not ready for upskilling or scared of learning new technology, or an existing IT person who knows Intune little bit but does not understand the concepts clearly.

Keeping in mind the above scenarios, writing a book could be complex. Hence, the effort of this book is to start gradually, clearing the basics along with terminology. Then, moving forward with creating your own Intune account and integrating it with existing infrastructure. Readers who wants to learn just Intune as standalone or Intune in hybrid environment, both are going to get benefit with this book. The latter one is a bit complex topic, however, reader will be able to understand the concepts with each chapter as they progress with.

The book will then move forward with performing the day to day tasks for Intune administrator. They will also get exposure on architect level design decision along with best practices for Microsoft Intune. There are so many comparisons, pros and cons covered in the book for various topics which will give you clear picture of that specific feature.

Understanding Intune licensing along with other Microsoft 365 licensing can be daunting. The book will make this topic easier for understanding.

With this book, you will gain the knowledge and skills to become a proficient Intune Administrator and architect in the field of enterprise Enterprise mobility. I hope you will find this book informative and helpful.

Chapter 1: Introduction to the Course – This covers the topic on what is required to begin with the Microsoft Intune course

Chapter 2: Fundamentals of Microsoft Intune – Explains the basic terminology related to Microsoft Intune and Cloud. Covers the topic what is Microsoft Intune, its history and evolution. It covers the topic on why we should use Intune and how it is different from Configuration Manager (SCCM). Furthermore, it includes the features and complexity of various environments including cloud-only, on-premises and hybrid infrastructure. It covers pros and cons of each infra. The chapter also includes the license you may need to choose for your organization.

Chapter 3: Setting Up and Configuring Intune – Covers the topic on how to setup your Intune account including various other settings which makes the fully functional environment. It covers the topic such as enabling Microsoft Entra ID, creating users, assigning license to them. Finally ending with enrolling the first Windows 11 device to Intune.

Chapter 4: Device Enrollment Method – Explains what Intune enrollment means. It covers the topic on pre-requisites for enrolling the device. It also includes creating the CNAME record for enrollment and various windows enrollment methods. There are multiple enrollment types for device enrollment which includes enrolling via Company portal, Access work or school account, MDM only enrollment, Autopilot (user driven mode and self-deploying mode), Device enrollment manager, group policy, SCCM co-management and bulk enrollment.

Chapter 5: Preparing Infrastructure for On-premises Infra with SCCM – This chapter specifically focuses on how to prepare the infrastructure for hybrid environment. The environment which consists of Intune setup along with on-premises infrastructure is explained. All on-premises pre-requisites are covered explain Microsoft Entra ID connect configuration including Microsoft Entra hybrid join configuration. It also covers detailed setup on enrolling the devices via group policy and SCCM co-management.

Chapter 6: Co-management: Migration from SCCM to Intune – This chapter specifically focused Intune integration with Configuration Manager including migration strategy. This includes the detailed explanation of co-management capabilities. It further covers the topic on co-management, cloud attach feature where Intune can be integrated with Configuration Manager. Detailed explanation of workload is explained for co-management feature. Furthermore, chapter focuses heavily on strategy for the migration of various workloads from Configuration Manager to Intune in efficient way.

Chapter 7: Explore Device Management Features – Explains how Intune admin center and Microsoft Entra ID looks like to manage devices, users, licenses and others. The chapter focuses upon device properties and actions along with few other configuration related to Device enrollment settings.

Chapter 8: Configure Windows Update for Business – Explains how to deploy various updates via Intune which is known as Windows Update for Business (WUfB). There are various kinds of updates which can be deployed via Intune. It covers the topic on how WUfB is different from deploying the updates via SCCM/WSUS along with pros and cons for each. The chapter further explains various WUfB policies consisting of update ring, feature update, quality updates and driver updates.

Chapter 9: Application Management – Explains how to deploy applications via Microsoft Intune. There are various types of applications which can be deployed via Microsoft Intune including Line-of-Business application, Win32 application, Microsoft 365 apps, store apps and others. Win32 app deployment requires Win32 content prep tool for the conversion of application to be uploaded. It covers the tips for deploying the applications.

Chapter 10: Configure Policies and Settings – Explains on how to deploy configuration policies to device. These policies are known as MDM policy which are different from group policy. The chapter explains how these two types of policies are different. MDM policy relies on Configuration Service Provider (CSP), hence detailed explanation of workflow is explained. It also consists of various types of configuration profiles to be deployed such as, administrative templates, settings catalog and custom OMA-URI. The chapter also covers resolving the conflict between MDM and group policy. It also includes migration of group policy to Intune using group policy analytics. Importing of ADMX templates and challenges with MDM policy is also covered. Finally ending with strategy for migrating GPO to Intune.

Chapter 11: Windows Autopilot – Explains how to provision the operating system via Windows Autopilot feature. The topic includes difference between task sequence and autopilot provisioning. Task sequence which is more of a legacy method to deploy operating via SCCM / MDT, while Autopilot is modern way of provisioning the operating system. Windows Autopilot topics are covered such as creating the hardware ID file, creation of deployment profile, setting up enrollment status page (ESP) and creation of dynamic group required for autopilot.

We will also cover Windows Autopilot device preparation which is also known as Autopilot v2. This is a new initiative by Microsoft which allows much faster provisioning of device without requiring upload of hardware hash.

Chapter 12: Device Management and Protection – Explains the device management techniques and how to protect them. The chapter covers the understanding of Role-based access control (RBAC) to provide appropriate access to the administrators. It also includes usage of filters and scope tags for the deployments. Furthermore, it covers scripts and remediations where both uses PowerShell scripts, however former one is used for one type execution while the latter one is used for remediation which runs on repeated interval set via specific frequency. It also includes the topic to protect the apps such as App protection policy, App configuration policy, policies for office apps and policy sets.

Chapter 13: Securing Device – The chapter heavily focuses on securing the devices within the organization. Endpoint security node under Microsoft Intune admin center provides various features to secure the device. Microsoft Defender is one of the feature which provides the mobile threat defense solution, this solution can be integrated with Intune. It

has a separate console where we can make granular level settings to protect the devices. It covers the topic on how to encrypt the disk via BitLocker, configuration of Firewall policies. Endpoint privilege management feature is explained which allows standard users to elevate the privileges. Other topics such as Windows LAPS, Compliance policies, conditional access policies and Windows Hello for Business is also covered.

Chapter 14: Reporting and Monitoring – Explains on how to check the assignment of policies and other settings via reporting / monitoring feature. There are certain inbuilt reports and monitoring functionality available within Intune portal which allows the monitoring of the deployments. Windows Update for Business report is something which we need to configure which is a useful report to get patch compliance data and looking for failed devices. There are other topics covered through which we can get the data related to Intune via Microsoft Graph, PowerShell Module for Intune and Kusto Query Language (KQL).

Chapter 15: Endpoint Analytics – Explains what is Endpoint analytics and how it is useful for organizations to identify the issues related to hardware, policies or any other factor which might be contributing to slowness of the device. Detailed explanation of endpoint analytics with report is explained. This covers various metrics of endpoint analytics such as startup performance, application reliability and work from anywhere.

Chapter 16: Microsoft Intune Suite and Advance Settings – The chapter explains the advance features which are covered under Microsoft Intune suite. This is an add-on license which comes with various benefits. This covers the advanced endpoint analytics, endpoint privilege management, firmware-over-the-air update, Microsoft tunnel for mobile app management, remote help, management of specialty devices. The chapter also includes multi admin approval and windows autopatch feature.

Chapter 17: Troubleshooting – Explains the detailed troubleshooting methods required for Microsoft Intune. The chapter covers various techniques to collect MDM diagnostics which can be collected locally and remotely. It also explains the deciphering of log files to look for the correct information to troubleshoot the issue. It covers how to troubleshoot when policies are not applying correctly, application install issues, custom compliance policy issues, script issues and remediation issues. Furthermore, it covers the topic for various community tools which can be used to troubleshoot the various Intune issues. These community tools are created by Microsoft expert and one should always keep them handy to perform day to day activities. What each tool does and the way it can help to analyse the issue is covered in the chapter.

Coloured Images

Please follow the link to download the
Coloured Images of the book:

<https://rebrand.ly/be8cda>

We have code bundles from our rich catalogue of books and videos available at <https://github.com/bpbpublications>. Check them out!

Errata

We take immense pride in our work at BPB Publications and follow best practices to ensure the accuracy of our content to provide with an indulging reading experience to our subscribers. Our readers are our mirrors, and we use their inputs to reflect and improve upon human errors, if any, that may have occurred during the publishing processes involved. To let us maintain the quality and help us reach out to any readers who might be having difficulties due to any unforeseen errors, please write to us at :

errata@bpbonline.com

Your support, suggestions and feedbacks are highly appreciated by the BPB Publications' Family.

Did you know that BPB offers eBook versions of every book published, with PDF and ePub files available? You can upgrade to the eBook version at www.bpbonline.com and as a print book customer, you are entitled to a discount on the eBook copy. Get in touch with us at :

business@bpbonline.com for more details.

At www.bpbonline.com, you can also read a collection of free technical articles, sign up for a range of free newsletters, and receive exclusive discounts and offers on BPB books and eBooks.

Piracy

If you come across any illegal copies of our works in any form on the internet, we would be grateful if you would provide us with the location address or website name. Please contact us at **business@bpbonline.com** with a link to the material.

If you are interested in becoming an author

If there is a topic that you have expertise in, and you are interested in either writing or contributing to a book, please visit **www.bpbonline.com**. We have worked with thousands of developers and tech professionals, just like you, to help them share their insights with the global tech community. You can make a general application, apply for a specific hot topic that we are recruiting an author for, or submit your own idea.

Reviews

Please leave a review. Once you have read and used this book, why not leave a review on the site that you purchased it from? Potential readers can then see and use your unbiased opinion to make purchase decisions. We at BPB can understand what you think about our products, and our authors can see your feedback on their book. Thank you!

For more information about BPB, please visit **www.bpbonline.com**.

Join our book's Discord space

Join the book's Discord Workspace for Latest updates, Offers, Tech happenings around the world, New Release and Sessions with the Authors:

<https://discord.bpbonline.com>



Table of Contents

1. Introduction to the Course	1
Introduction.....	1
Objectives	1
Structure.....	2
Cloud only approach	2
<i>Intune account</i>	2
Microsoft Entra tenant.....	2
<i>Virtual machine (Workgroup join with Windows 10 or Windows 11)</i>	3
Hybrid approach (on-premises + Cloud)	3
<i>Active directory with domain controller</i>	4
<i>SCCM server</i>	4
<i>Virtual machine (domain joined)</i>	4
Conclusion.....	4
Points to remember	4
2. Fundamentals of Microsoft Intune.....	5
Introduction.....	5
Objectives	5
Structure.....	5
Basic terminology	6
Understanding SCCM	9
Understanding Microsoft Intune	10
History and evolution of Microsoft Intune:	10
Microsoft Intune functionality.....	11
<i>Microsoft Intune pricing and license</i>	13
<i>Microsoft Intune Plan 1</i>	13
<i>Microsoft Intune Plan 2</i>	13
<i>Microsoft Intune Suite</i>	13
<i>Important licenses which includes Microsoft Intune Plan 1</i>	16
<i>Enterprise Mobility + Security E3 or E5 (EMS + E3/E5)</i>	16

<i>Microsoft 365 Business Premium</i>	16
<i>Microsoft 365 E3 or E5</i>	17
<i>Office 365 E3 or E5</i>	17
<i>Choosing the right license for your organization</i>	17
<i>Choosing Microsoft 365 Business Premium</i>	18
<i>Choosing EMS + E3 or EMS + E5</i>	18
<i>Choosing Microsoft 365 E3 or E5</i>	18
<i>Choosing Office 365 E3 or E5</i>	19
<i>Microsoft Intune product family</i>	20
Integration of SCCM with Intune	21
Features and complexity of various environment	21
<i>Cloud only infrastructure</i>	21
<i>Pros</i>	21
<i>Cons</i>	22
<i>On-premises infrastructure</i>	23
<i>Pros</i>	23
<i>Cons</i>	23
<i>Hybrid (with no SCCM)</i>	23
<i>Pros</i>	24
<i>Cons</i>	24
<i>Hybrid (with SCCM)</i>	24
<i>Pros</i>	25
<i>Cons</i>	25
Understanding the difference between SCCM and Intune	25
<i>SCCM vs. Intune</i>	26
<i>Intune's ability to replace Configuration Manager</i>	26
<i>Choosing Intune over SCCM</i>	27
Conclusion	28
Points to remember	28
Exercises	28
Answers	29

3. Setting Up and Configuring Intune.....	31
Introduction.....	31
Objectives	31
Structure.....	31
Preparing infrastructure for Intune	32
<i>Setting up Intune account</i>	<i>33</i>
<i>Configuration required for Intune and Azure.....</i>	<i>36</i>
<i>Enabling Microsoft Entra join</i>	<i>37</i>
<i>Enabling automatic enrollment.....</i>	<i>39</i>
Microsoft Entra joined devices vs registered devices.....	41
<i>Configure company branding in Microsoft Entra ID</i>	<i>42</i>
<i>Change Tenant name in Microsoft Entra ID</i>	<i>46</i>
<i>Configuring company portal branding</i>	<i>47</i>
<i>Setup custom Domain in Azure Portal.....</i>	<i>49</i>
<i>Creating user</i>	<i>54</i>
<i>Assigning license.....</i>	<i>57</i>
Enrolling Windows 11 device to Intune	58
<i>Verify enrollment status on device</i>	<i>62</i>
Conclusion.....	63
Points to remember	63
Exercise	64
Answers	64
4. Device Enrollment Method	65
Introduction.....	65
Objectives	65
Structure.....	65
Understanding enrollment.....	66
Prerequisites for enrolling the device.....	66
Creating CNAME record for enrollment	67
Windows enrollment types.....	69
<i>Company portal.....</i>	<i>70</i>
Downloading the company portal and enrolling the device	71

Access work or school account.....	74
Device showing as a corporate	76
Difference between corporate device and personal device	76
Changing ownership of device.....	77
MDM only enrollment.....	78
Autopilot (user-driven mode).....	80
Autopilot (self-deploying mode).....	80
Device enrollment manager.....	81
Group Policy.....	83
SCCM co-management	85
Bulk enrollment	85
Creating a bulk enrollment package.....	86
Conclusion.....	90
Points to remember	91
Exercise	91
Answers	92
5. Preparing Infrastructure for On-premises Infra with SCCM.....	93
Introduction.....	93
Structure.....	93
Objectives	94
Prepare for Microsoft Entra hybrid join using Microsoft Entra Connect.....	94
Microsoft Entra Connect.....	94
Downloading Microsoft Entra Connect.....	95
Configuring the UPN suffix on the on-premises server.....	96
Installing Microsoft Entra Connect.....	98
Microsoft Entra hybrid join configuration.....	106
Enroll devices via group policy.....	114
Enroll devices via SCCM co-management.....	119
Cloud Attach for enabling co-management.....	119
Performing steps to enable co-management	119
Configure Client settings to enable automatic register	120
Prepare Intune collections	121

<i>Configure Cloud attach</i>	121
<i>Configure Workloads for co-management</i>	125
Enroll device via Co-management feature	127
Device enrollment difference: GPO vs co-management.....	129
Conclusion.....	129
Points to remember	129
Exercise	130
Answers	130
6. Co-management: Migration from SCCM to Intune	131
Introduction.....	131
Structure.....	131
Objectives	132
Co-management capabilities and explanation.....	132
<i>Co-management explained</i>	132
Cloud attach.....	134
Workloads explained	135
<i>Compliance policies</i>	135
<i>Device configuration</i>	136
<i>Endpoint protection</i>	137
<i>Resource access policies</i>	138
<i>Client apps</i>	139
<i>Office Click-to-Run apps</i>	140
<i>Windows Update for Business policies</i>	141
Correlation between collections and workloads	141
Workload numbers explained	144
Strategy to migrate endpoints to Intune	146
<i>Migration strategy for Group Policies</i>	146
<i>Using the hybrid model and cloud-only model at the same time</i>	146
<i>Workload migration strategy</i>	147
<i>Migration strategy for Windows Update</i>	147
<i>Migration strategy for Client apps</i>	148
<i>Migration strategy for Compliance policies</i>	149

<i>Migration strategy for operating system</i>	149
Conclusion.....	149
Points to remember	150
Exercise	150
Answers	150
7. Explore Device Management Features.....	151
Introduction.....	151
Structure.....	151
Objectives	152
Exploring Microsoft Entra ID	152
<i>Exploring users, groups and devices</i>	152
<i>Create dynamic group</i>	156
Exploring Intune Admin center	161
<i>Device properties</i>	163
<i>Device actions</i>	165
<i>Configuring Device enrollment settings</i>	172
<i>Device limit restrictions</i>	172
<i>Device platform restrictions</i>	173
<i>Corporate device identifiers</i>	175
<i>Device clean-up rules</i>	176
<i>Device clean-up for Microsoft Entra ID</i>	177
Conclusion.....	178
Points to remember	179
Exercises.....	179
Answers	180
8. Configure Windows Update for Business	181
Introduction.....	181
Structure.....	182
Objectives	182
Windows Update for Business explanation	182
Benefits of utilizing Windows Update for Business.....	184

<i>Methods to deploy Windows Update for Business</i>	184
Difference between WUfB and SCCM/WSUS.....	186
Types of WUfB policies.....	187
<i>Update rings for Windows 10 and later</i>	187
<i>User Experience notifications</i>	194
<i>Policy actions available for Update ring</i>	196
<i>Feature updates for Windows 10 and later</i>	197
Creating Feature update policy	197
<i>Quality updates for Windows 10 and later</i>	199
Creating an Expedite update policy	200
<i>Enabling Windows Health Monitoring to expedite update reporting</i>	201
<i>Driver updates for Windows 10 and later</i>	202
Use multiple rings for WUfB policy	205
Conclusion.....	206
Points to remember	206
Exercises.....	207
Answers	208
9. Application Management	209
Introduction.....	209
Structure.....	209
Objectives	210
Types of applications	210
<i>Line-of-business app</i>	210
<i>Win32 apps</i>	211
<i>Microsoft 365 apps</i>	211
<i>Microsoft Store apps</i>	211
Web link	212
<i>Microsoft Edge app</i>	212
Intune management extension	212
Deploy applications	213
<i>Microsoft store app</i>	213
<i>Line-of-business application</i>	217

Win32 app	219
Preparation for Win32 app	220
Convert the win32 app using Win32 content Prep tool	221
Create Win32 app in Intune	223
Microsoft 365 app.....	231
Web link app.....	234
Conclusion.....	236
Points to remember	236
Exercise	237
Answers	237
10. Configuration Policies and Settings	239
Introduction.....	239
Structure.....	240
Objectives	240
Understanding configuration profiles.....	241
Group policy	242
MDM policy and components involved	243
CSP.....	244
OMA-URIs	244
SyncML.....	246
Difference between group policy and MDM policy.....	247
Types of configuration profiles.....	247
Administrative templates.....	247
Pros and cons of using administrative templates.....	254
Settings catalog	254
Benefits of using settings catalog	254
Custom settings utilizing OMA-URI	259
Configuration profiles with available templates	265
Resolve conflict of policies	266
Conflict between multiple MDM policy	266
Conflict between MDM policy and group policy.....	267
Migrate group policy to Intune	268

<i>Group policy analytics</i>	268
<i>Import ADMX templates</i>	273
Challenges with MDM policy.....	278
Strategy for migrating GPO to Intune.....	279
Conclusion.....	280
Points to remember	280
Exercises.....	281
Answers	281
11. Windows Autopilot.....	283
Introduction.....	283
Structure.....	284
Objectives	284
Windows Autopilot explained	284
<i>Deployment modes for deployment profiles</i>	287
<i>Windows Autopilot support for hybrid joined devices</i>	288
Task sequence vs. Windows Autopilot.....	289
Setup Windows autopilot.....	289
<i>Discussion on previously configured settings</i>	290
<i>Collect and upload hardware hash to Intune Portal</i>	290
<i>Create a Dynamic group for autopilot device</i>	293
<i>Create enrollment status page</i>	295
<i>Create deployment profile</i>	297
<i>Autopilot build process</i>	302
Windows Autopilot device preparation aka Autopilot v2.....	307
Functionality of Windows Autopilot Device preparation.....	308
Limitations of Windows Autopilot device preparation.....	313
Conclusion.....	314
Points to remember	314
Exercises.....	315
Answers	315

12. Device Management and Protection	317
Introduction.....	317
Structure.....	318
Objectives	318
Filters.....	318
Role-based access control.....	323
<i>Custom roles</i>	324
Scope tags	325
Scripts.....	331
Remediations.....	335
App protection policy.....	339
App configuration policy	342
<i>Policies for Office apps</i>	343
Policy sets	345
Conclusion.....	348
Points to remember	348
Exercises.....	349
Answers	350
13. Securing Device.....	351
Introduction.....	351
Objectives	352
Structure.....	352
Endpoint security	353
<i>Deploy Endpoint security policies</i>	354
Microsoft Defender for Endpoint.....	355
Security baselines	361
Antivirus.....	363
Disk encryption using BitLocker.....	365
Firewall policies.....	367
Endpoint Privilege Management.....	369
Windows Local Administrator Pass Solution	375
Compliance policies	378

<i>Create custom compliance</i>	380
Conditional access policy	383
Windows Hello for Business.....	387
Conclusion.....	390
Points to remember	390
Exercises.....	391
Answers	392
14. Reporting and Monitoring	393
Introduction.....	393
Structure.....	394
Objectives	394
Exploring reports.....	394
<i>Report for Audit logs</i>	397
Windows Update for Business reports.....	399
Monitor deployments	401
Microsoft Graph.....	402
PowerShell Module for Intune	407
Kusto Query Language	410
<i>Customize Windows Update for Business reports using KQL</i>	412
Conclusion.....	413
Points to remember	414
Exercises.....	415
<i>Answers</i>	416
15. Endpoint Analytics	417
Introduction.....	417
Structure.....	418
Objectives	418
Endpoint analytics.....	419
<i>Enroll devices in Endpoint analytics using Intune</i>	419
<i>Enroll devices in Endpoint analytics using Configuration Manager</i>	420
<i>Endpoint analytics overview</i>	421

Endpoint analytics reports	422
<i>Startup performance</i>	423
<i>Application reliability</i>	426
<i>Work from anywhere</i>	429
Conclusion.....	434
Points to remember	434
Exercise	435
Answers	436
16. Microsoft Intune Suite and Advance Settings	437
Introduction.....	437
Structure.....	438
Objectives	438
Microsoft Intune Suite	438
<i>Advanced analytics</i>	440
<i>Endpoint privilege management</i>	441
<i>Firmware-over-the-air update</i>	441
<i>Microsoft tunnel for Mobile app management</i>	442
<i>Remote help</i>	444
<i>Management of specialty devices</i>	449
Multi Admin approval.....	450
Windows Autopatch	453
Conclusion.....	458
Points to remember	459
Exercises.....	459
Answers	460
17. Troubleshooting	461
Introduction.....	461
Structure.....	462
Objectives	462
Intune enrollment issues	463
MDM diagnostics logs: capturing and deciphering.....	465

<i>Get MDM Diagnostics locally: export report</i>	465
<i>MDM diagnostics: advance log files</i>	469
<i>Get MDM diagnostics locally using the command line</i>	472
<i>Collect MDM logs locally from event viewer</i>	474
<i>Collect Device diagnostics logs remotely: Intune admin center</i>	476
Policies not applying correctly	477
Troubleshoot application install issues	479
<i>Troubleshoot Win32 applications</i>	480
Troubleshoot custom compliance policies	484
Troubleshoot scripts using log files	485
Troubleshoot remediation script using log files.....	486
Community tools.....	488
<i>Intune Debut Toolkit</i>	488
<i>Intune Device Details Debug Tool</i>	489
<i>Intune stuff</i>	490
<i>Autopilot diagnostics</i>	491
<i>Intune One Data Collector</i>	492
<i>Intune Management Extension Diagnostics</i>	492
<i>SyncMLViewer</i>	493
Conclusion.....	493
Points to remember	494
Index	495-503

CHAPTER 1

Introduction to the Course

Introduction

We are going to embark on the journey to learn Microsoft Intune, a cloud-based product to manage and secure devices. Before initiating the learning process, let us understand what will be required to begin the course.

Treat it like the ingredients required for the recipe. There are several ways you can prepare yourself for Intune. We can have various kinds of setup for Intune learning. The first one is easy to set up and the second one requires some additional effort. The kind of setups are as follows:

- Cloud only approach
- Hybrid approach

There are several benefits for each kind of approach which we will be discussing further.

Objectives

By the end of this chapter, you will be able to understand the basic requirement for beginning with this comprehensive course. This will not only give you clarity on how to setup, but also the correct path for you to follow whether you go only with the easy-to-understand cloud-only approach or choose the complex hybrid approach.

Structure

The chapter covers following topics:

- Cloud only approach
 - Intune account
 - Microsoft Entra tenant
 - Virtual machine (Workgroup join with Windows 10 or Windows 11)
- Hybrid approach (on-premises + Cloud)
 - Active directory with domain controller
 - SCCM server
 - Virtual machine (domain joined)

Cloud only approach

Cloud only approach refers to cloud-based endpoint management solution without having any on-premises infrastructure. Here, management will be done just by Intune web-based portal and devices will be directly reporting to Microsoft Entra and Intune. There is no domain joined scenario, no group policies, no Configuration Manager / WSUS (Windows Server Update Services), and so on.

This is one of the best approaches to start with Intune learning process as this is fairly easy to understand. There is no complexity involved as there is no on-premises infrastructure and dependency upon it.

With this approach, you can set up your trial Intune account in a matter of minutes. It will be ready to deploy your first application in less than one hour. This approach is highly recommended if you are a novice or want to avoid the complex process of learning the technology. This process only requires you to have Intune account setup done and at least one device, such as a laptop/desktop or preferably a Virtual Machine.

Intune account

We need to set up an Intune account. For that, we are going to use the Trial version and within no time, we will have an Intune account ready to be explored.

Microsoft Entra tenant

We also need the Microsoft Entra tenant, previously known as **Azure AD tenant**, to begin our cloud journey with Intune. The good news is, this gets automatically configured while setting up the Intune account. Intune cannot work without Microsoft Entra ID as they are tightly integrated. Intune is integrated with Microsoft Entra ID, in backend it uses users, groups and devices which are part of Microsoft Entra ID to manage these identities via Intune. Microsoft Entra ID has a portal different from Intune. However, some objects such