# Office 365 with SharePoint Online Cookbook Solutions

*Maximize your productivity with Office 365 and SharePoint Online* 

**Alex Pollard** 



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# Dedicated to

My beloved wife **Nikole** and My Daughter **Uliana** 

 $\mathcal{E}$ 

My Mom **Tatyana Pashkevych** 

## About the Author

Alex has a Master's degree in Computer Sciences, and more than 12 years of experience in web development and programming for Microsoft platform and applications. He has worked as an IT Consultant and Software Engineer in the area of Collaboration Environments, SharePoint development, and Migrations to the Cloud.

Alex started his journey by setting up and configuring SharePoint for large financial organizations and banks, back when it was SharePoint 2007 as Windows SharePoint Services (wss) 3.0. Since then, he has worked with various SharePoint platforms for on-premise environments 2007, 2010, 2013, 2016, and 2019, as well as Office 365 and SharePoint online. From his vast experience, Alex attained a deep knowledge of SharePoint and related products from administration, Development, Configuration, and Support angles. Once Alex gained enough experience, he opened his own IT Consulting company. Nowadays, he works with large enterprise companies from Fortune 500 and national government agencies. Alex holds multiple Microsoft certifications, is a public speaker, and continues growing the business and providing services to the company's clients.

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## **About the Reviewers**

- Oleksandr Vedmid's career in IT spans over 20 years in various roles, from Developer to Software Architect. Development is his true passion, and he has been involved in various projects throughout his entire career, in different technical and business areas, with a major focus on the implementation of reporting and collaboration portals, based on the Microsoft stack of technologies: O365, SharePoint, Microsoft Flow, and PowerApps.
- Leslie Rivera is an ambitious expert at anything Microsoft. With over twenty years of experience, she has dedicated her life to helping others by identifying opportunities to improve productivity and streamline processes through M365 products. Her talent for bridging past and future technologies helps her deliver quantifiable solutions to stakeholders. Her goal is to develop and affect change with technology. When not at work, Leslie enjoys time with family, watching HGTV, and aspires to retire in peace on the beach one day.
- Andre Galitsky is a collaboration architect and consultant, specializing in Microsoft SharePoint and related technologies. He has more than twenty years of IT industry experience, and since 2006, he has focused almost exclusively on Microsoft SharePoint solutions. He has been involved in a number of largescale SharePoint implementations for both private and government clients, affecting thousands of users and many terabytes of content.

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## Preface

In thisbook, you will get an in-depth understanding of the Microsoft Office 365 (O365) platform from various angles such as Implementations, Set Up, Administrations, Out of the Box (OOB) development, custom solutions development, and business process automation. We will start with a high-level platform overview and what it is used for and then slowly continue diving deeper into the topic and have some practice samples. We will also look at a wide variety of technologies and techniques associated with O365 and induced applications scuh as SharePoint, OneDrive, Exchange, Teams, and so on. The book will be useful to people who are learning about Microsoft Office 365 as well as professionals who would like to switch their focus from other similar platforms or want to enhance O365 knowledge.

You will learn how to use technologies and frameworks such as PowerApps, Power Automate, SharePoint Designer, InfoPath, Office 365 Admin center, SQL and Security and Compliance center, as well as React, SPFX, PnP and PowerShell.

**Chapter 1: Outline of Microsoft 365** – discusses what Microsoft Office 365 is; what it is used for and what is its main purpose. We will also cover how companies all over the world use Office 365 for their needs and what the main difference between on-premise and online versions of Microsoft apps is.

**Chapter 2: Prologue to SharePoint Online** – reviews the evolution path of SharePoint. We will cover where the idea of creating SharePoint came from and how it evolved from wss 3.0 to SharePoint online, which is used globally nowadays. We will review the high-level administration, configuration, and security capabilities of SharePoint online and how they can be used in real-world projects.

**Chapter 3: Working with Present-day Destinations in SharePoint Online** – will dive deeper into the topic of SharePoint. Here, we will discover what components SharePoint consists of and what the main pieces in the puzzle are; how to set up the right permissions so that users would have access to the information they need; how to protect and secure your organization's data, and more.

**Chapter 4: Working with Records in SharePoint Online** – overviews SharePoint and its capabilities even further. How often have you seen situations where documents are supposed to be retained for 5 or 10, or even more years? This is where the Records management feature in SharePoint comes in. Here, we will

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review in more detail what records management is; how to configure it for your specific case; and how to protect and preserve your data for the years ahead.

**Chapter 5: Working with Archive Libraries in SharePoint Online** – discusses some built-in and custom features available in SharePoint, that helps to free up space and keep data organized, by periodically archiving some information. The chapter reviews them and lets the reader find how to properly organize, manage and archive data to make sure your collaboration environment always stays up to date and easy to navigate and find the right piece of information.

**Chapter 6: OneDrive for Business** – discusses what OneDrive is, and why we should use it when we have SharePoint available already. The same as SharePoint, OneDrive is available as a part of the Office 365 suite, and it also has its own desktop client for a more convenient user experience. In this chapter, you will learn the main difference in purpose between SharePoint and OneDrive, what to use when, and what features are available similar and different between them.

**Chapter 7: Search in Microsoft 365** – discusses Search, which is one of the core functions of any platform. Here you will learn how to get the best out of the SharePoint online search. You will become familiar with search templates, crawling, metadata, search results templates, indexing, and other core capabilities of SPO search. After a proper configuration, users will be able to find documents effectively, fast, and in a reliable way.

**Chapter 8: Microsoft Groups –** explores how essential it is to set up correct permission levels and organize users accordingly, in order to build a proper governance model in the Office 365 environment. The most common way to manage groups is via Active Directory (AD) groups. But let us see what Office 365 groups can offer instead, and how they can supplement AD functionality. In this chapter, you will learn how to set up Office 365 groups, where to manage them, and how to properly organize users.

**Chapter 9:** Microsoft Teams – discusses how, with more and more people switching to remote work every day, the need of tools that would support instant chatting and meeting capabilities has dramatically increased. When it comes to a collaboration, Microsoft Teams covers all aspects such as chatting, meeting, calendars, as well as approvals and file management. In this chapter, we will overview what are the main capabilities of Microsoft Teams. You will create your own Teams channel, configure permissions, and add supporting tabs and materials to your channel.

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**Chapter 10:** Power Platform and Citizen Development – discusses Power Platform, which is the new low-code solution from Microsoft to allow users to develop applications and workflows and automate business processes. The beauty of any low-code solution is that no coding skills are needed from the user working on the functionality. Hence, development can be done by regular employees with no or minimal training provided. Power Platform is a combination of applications that includes PowerApps (with Canvas, Model Driven, Power Portals, Dataverse) and Power Automate (with Flows and solutions). This chapter will cover how regular users can use all of the apps and what are the best ways for organizations to utilize various development approaches.

**Chapter 11: Stream –** explores the whole idea behind Stream, that is, to provide an application integrated with Microsoft 365 suite that can store videos, where users can create their channels and publish various media files assigning metadata to them. This chapter will cover all these and review how Stream can be integrated with other Microsoft 365 apps such as SharePoint or Teams.

**Chapter 12: PowerApps** – dives deeper into the PowerApps topic. As you already know, there are multiple different versions of PowerApps: Canvas and Model Driven. Information can be stored in SharePoint, Dataverse, SQL or even at Excel. We will review how to build simple Canvas and Model Driven app. You will learn how to connect your app to the proper data source, how to operate and manipulate the data from there and add various validations to the form.

**Chapter 13: Power Automate** – dives deeper into Power Automate, and discusses how to build various versions of Flows: running on start, on modify, or scheduled. You will learn a few basic actions commonly used to automate processes in Power Automate, as well as review connections to API and how to make queries directly from the Flow.

**Chapter 14: Power BI** – discusses PowerBI as a powerful tool for creating dashboards, analytics reports, and data visualization. It will also explore PowerBI licensing, PowerBI Desktop, how to create reports and publish them, and how to integrate and prepare reports back to SharePoint and make them visible to other users. Moreover, the chapter will overview different data sources and connectors available in the tool and how filters, sorting, and different views can be implemented based on your needs.

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**Chapter 15: Office 365 Admin Center** – goes through the administration and management of the applications using the Microsoft 365 Admin center. It includes various admin centers and their capabilities to configure policies, set up users and manage billing.

**Chapter 16: Security and Compliance Policies** – explores the topic of security in the Microsoft 365 ecosystem, that covers all applications included in the suite. It discusses how to protect your environment from unwanted data leakage or information sharing with external sources, how to set up an environment in a way that would be compliant with policies such as HIPA, and all possible applications starting from SharePoint and finishing with Exchange. You will also learn about eDiscovery, Labels and other tools available as a part of the Security and Compliance Center.

**Chapter 17: Term Store and Content Sorts in SharePoint Online** – discusses Term Store, that helps to expand metadata capabilities and navigation options. On Term Store, terms aka managed metadata, can be created in a proper structure and later be assigned to specific documents or items in SharePoint, or can even be used to build the navigation. In this chapter, you will learn how to access Term store, create Term groups and Terms, and later use them for your content or navigation management needs.

**Chapter 18: Custom Solutions Development SPFX** – explores how SharePoint offers advanced customization when it comes to updating features based on the company's needs, compared to what SPO can offer out of the box. That is why SPFX solutions might be needed. Using React, Angular or any other JavaScript framework of your choice, you can develop custom web-parts, custom look and feel, dashboards, reports, and much more. In this chapter, we will review the history of customization support for various SharePoint platforms and what approaches are available nowadays.

**Chapter 19: PnP, PowerShell and Scripting** – reviews the main scripting languages supported by Microsoft 365, like PowerShell, PnP, CSOM, and even CAML. Using scripts, Admins can generate reports faster, retrieve and operate with data in the platform, set up policies and much more, all from cmd interface.

## **Code Bundle and Coloured Images**

Please follow the link to download the *Code Bundle* and the *Coloured Images* of the book:

## https://rebrand.ly/v0s4n26

The code bundle for the book is also hosted on GitHub at **https://github.com/bpbpublications/Office-365-with-SharePoint-Online-Cookbook-Solutions**. In case there's an update to the code, it will be updated on the existing GitHub repository.

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

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# Chapter 1 Outline of Microsoft 365

"Teamwork is the ability to work together toward a common vision. The ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows common people to attain uncommon results."

- Andrew Carnegie

# Introduction

More than a decade ago, at the time when the author started working with SharePoint, Windows SharePoint Services (WSS 3.0) to be precise, it was the race for leadership in the corporate market between Microsoft, Google, Box, and a few other platforms. It became obvious that big enterprise companies and government agencies are overloaded with paperwork. With evolving technologies in the web space, there is a massive market for setting up and organizing proper collaboration workspace. After all these years, we can see that Microsoft got a strong position in the Collaboration workspace (as it usually had with Windows, MS Office, and all other tools for corporate space).

In this chapter, we will start our journey from the Microsoft 365 overview, understand why it is so popular that every enterprise company uses its capabilities, and discover more of the history and pros and cons between the on-premises platform and cloudbased version.

## Structure

In this chapter, we will cover the following topics:

- The need for Microsoft 365
- Main capabilities of Microsoft 365
- On-premise versus online
- Licensing in Microsoft 365
- Setting up your own tenant

## **Objectives**

This chapter will discover what Microsoft Office 365 is, what it is used for, and its primary purpose. We will also cover how companies worldwide are using Office 365 for their needs and the main difference between on-premise and online versions of Microsoft apps.

# The need for Microsoft 365

Let us assume you are a large organization's Chief Technology Officer or Vice President of technology. What would your day-to-day tasks and problems you have to deal with be? Suppose we are talking about a "large organization". In that case, you probably have around ten thousand employees in your company, and you are responsible for ensuring they have the best tools and technologies available to complete their work daily. When employees complete their daily activities, they usually:

- Communicate with each other
- Work together on some documents
- Filling up forms
- Doing reviews
- Preparing reports
- Receiving and giving calls
- Attending meetings
- Sending emails
- Work on tasks and report their progress to managers, and so on.

Therefore, as a top-level executive and a good leader, you would be looking for ways to increase your employee's productivity, as you know it will directly impact your company sales and product quality. The equation is pretty simple; this higher productivity means more profit for the company and faster business development. So, it is a win-win game, employees do less work (or more work for the same amount of time), and the company receives more profit and develops faster.

This is precisely where Microsoft 365 comes into play. Let us check what activities employees commonly do and how Microsoft 365 can help boost their productivity.

**Communicate with each other, receive and give calls, attend meetings:** Microsoft Teams can help satisfy all the needs. Teams are included in all basic licenses, which we will review in more detail in the coming chapter. It is an excellent tool for setting up the entire collaboration environment. In fact, it is such a great tool and combines so many features that many companies switch all of their communication and document management needs to Teams. We will review its main capabilities in the next chapter.

**Work together on documents:** SharePoint and OneDrive are also included in all basic licenses and provide outstanding capabilities to create, store, share, and work together on documents. SharePoint would be a better fit for documents and materials shared across multiple people or departments. Meanwhile, OneDrive is a perfect workplace for personal and work-related documents.

**Fill up forms, and do reviews:** Power Platform is available to satisfy this need. Office 365 forms might be handy for creating forms or simple surveys. But if you are looking for more advanced capabilities, PowerApps would be a great fit with multiple data-source connectors available that will allow you to retrieve and store information in different places such as Excel, SharePoint lists, databases, 3<sup>rd</sup> party platforms like Salesforce, and so on. Moreover, Power Automate running in the background will help automate sending notifications and emails to persons needed, requesting approvals or reviews, handling status updates, and much more. Power Apps and Power Automate are big topics that we will cover separately in this book.

**Send emails:** Well, we have all used Outlook. But guess what? It is a part of Microsoft 365 as well. Outlook is the application and interface that allows users to work with their emails. Microsoft Exchange is the engine that handles all mail deliveries, rules, and filters. It is available in all Microsoft 365 licenses and provides a custom domain email address, Outlook client, and other features.

The list can go on and on. Thus, in our next chapter, we will cover the main capabilities of Microsoft 365 and do a high-level overview of all included applications and features.

For now, though, let us return to our Chief Technology Officer role and see why we would like to use Microsoft 365 that much. You see, M365 is a suite of applications

included and available to you, based on your license and the money you spend per user per month. Your end goal is to increase productivity and your employee's performance. So, why would you use multiple tools, support them, and have different teams to complete upgrades and solve issues, when you can have all the tools you need in one place?

That is precisely what Microsoft 365 is about! Plus, it is cloud-based, so you do not need to host your infrastructure and maintain servers. It is all done by Microsoft! Users need to use the browser or available desktop apps, and voila! All tools are at your fingertips!

Meanwhile, if you are cautious about security and compliances and want to maintain your infrastructure, an on-premises version of all apps is always available as an alternative. You can even have a cloud version and an on-premises and set up a Hybrid environment. However, we will talk later about it.

# Main capabilities of Microsoft 365

As discussed, Microsoft 365 (or Office 365) is a suite of apps available to you based on the purchased license. The minimal basic license includes apps, such as:

- Outlook
- Exchange
- OneDrive
- OneNote
- Teams
- SharePoint
- MS Office (Word, Excel, PowerPoint, and so on)
- PowerApps
- Power Automate

More advanced and add-on licenses may include apps, such as:

- Publisher
- Access DB
- Project