1.Microsoft365 fundamentals

Cloud Advanced

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1.Microsoft365 fundamentals

On Premise Workplace IT infrastructure
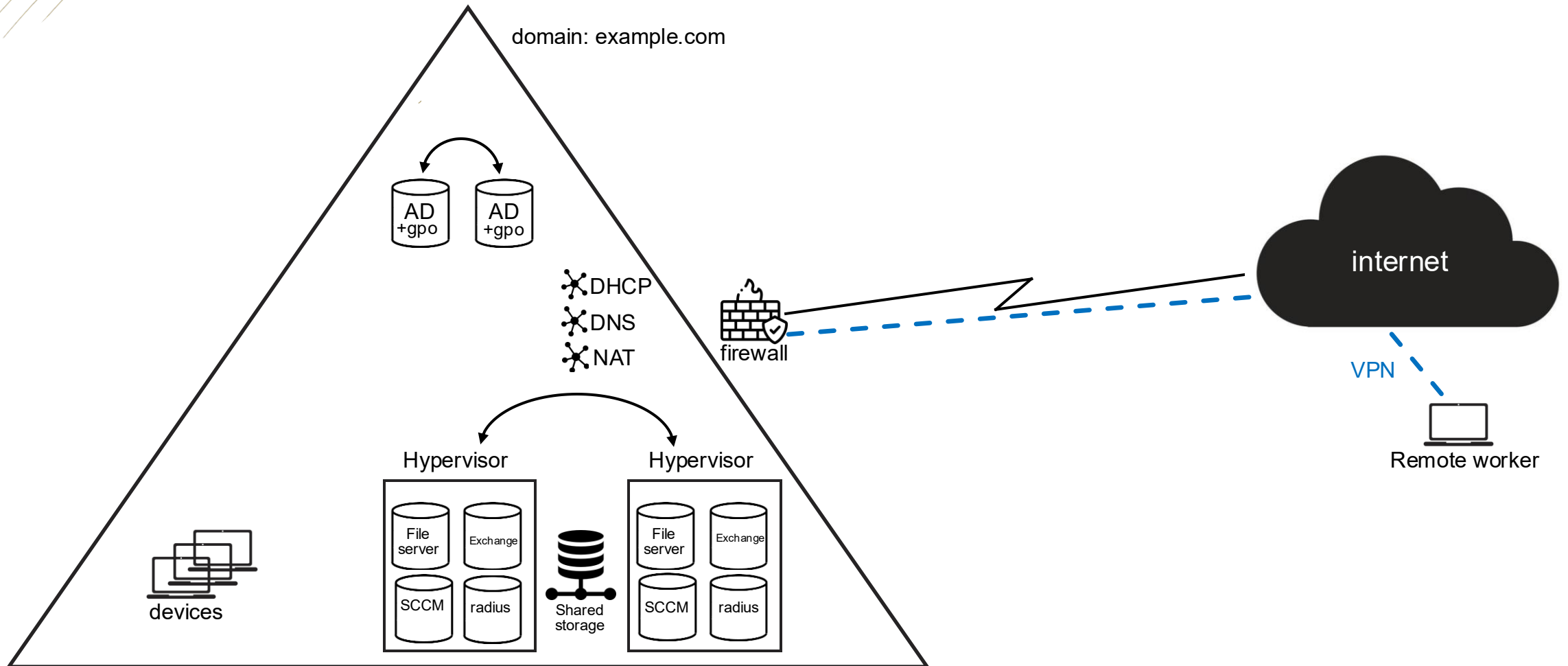
On Premise Workplace IT infrastructure

Services

Role - server

User management and authentication

 Active Directory

User and device policies - settings

 Group Policies

E-mail

 Exchange

File storage

 Fileserver

On Premise Workplace IT infrastructure

Services

Role - server

Device management: imaging, apps, updates

 System Center Configuration Manager

Authentication, Authorization and Accounting for network access

 Radius

+core network services: DHCP + DNS + NAT

On Premise Workplace IT infrastructure

In Person Office work: employees work primarily on-site

- Infrastructure is located on-premises.

- Each employee has either a dedicated or shared device

- The device is primarily used in the on-prem environment.

- Grant access to the IT environment for external users in limited cases.

- Employees working offsite or external users – connecting to the on-prem environment through VPN.

On Premise Workplace IT infrastructure

Modern workplace: Flexible and hybrid

- Combing remote work with in-person office work

- Each employee uses multiple devices: laptop, tablet, smartphone,…

- Employees access company resources through personal/mobile devices

- Extensive collaboration with external users: shared access to company resources, with time limited options.

➔ *A traditional on-prem IT infrastructure is not designed to address modern challenges like hybrid work, personal and mobile device usage, flexible collaboration with external partners.*

On Premise Workplace IT infrastructure

Core responsibilities of IT Operations in Workplace

1. User and Access Management

   • Administering user accounts and permissions

   • Managing authentication systems and access control

2. Software deployment and updates

   • Deploying, updating and maintain software applications

   • Maintaining patching cycles to ensure applications and operating systems remain secure and up-to-date

3. Proactively monitoring system performance and service health

On Premise Workplace IT infrastructure

Core responsibilities of IT Operations in Workplace

4. Device management

   - Creating and deploying standardized images across end-user devices.

   - Managing device lifecycles, including upgrades and replacements.

5. Helpdesk and support

   - Providing support for end-users

   - Managing service desk tickets

On Premise Workplace IT infrastructure

Besides these daily IT operations, the necessary tasks of an on-premises environment include:

- Deployment, configuration, and maintenance of physical hardware

- Implementation, configuration, and management of operating systems, services, and hypervisors

- Ensuring high availability and reliability of all individual services

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1.On-Prem Workplace IT infrastructure

2.Cloud Workplace IT infrastructure
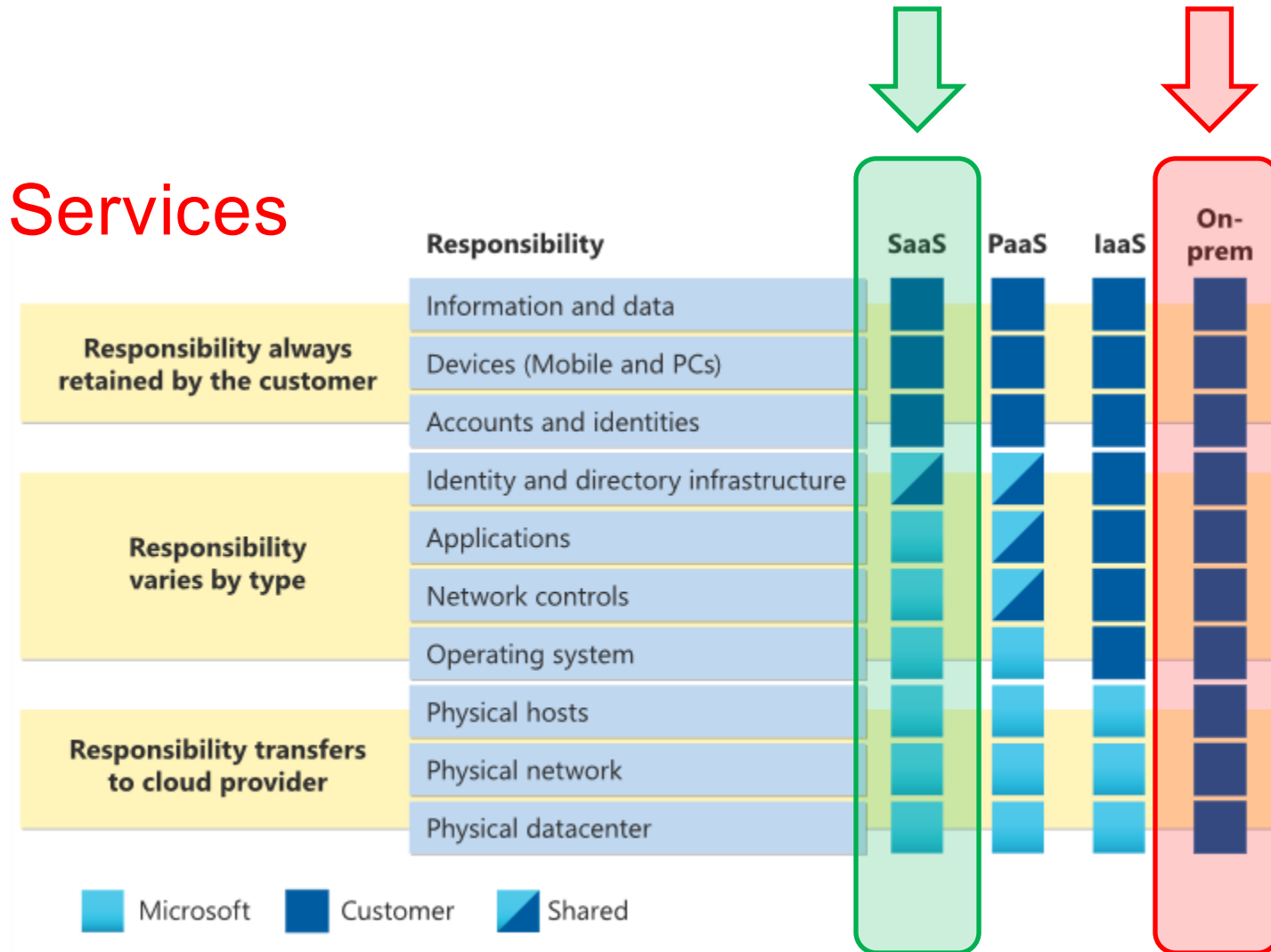
3.Microsoft365

4.Lab Environment

Cloud Workplace IT infrastructure

Microsoft365 addresses the challenges of the modern workplace:

- Flexible work, anytime and anywhere

- Tools for seamless connection, collaboration and security in a hybrid environment

- Dynamic collaboration with external partners

- Managing both personal and business devices

- Managing mobile devices (Android – IOS)

Cloud Workplace IT infrastructure

- Microsoft365

- Active Directory Domain Services

Cloud Workplace IT infrastructure

Services	Microsoft 365 service
User management and authentication	**Entra ID**
User and device policies - settings	**Intune**
E-mail	**Exchange Online**
File storage	**Sharepoint - OneDrive**

Cloud Workplace IT infrastructure

Services

Device management: imaging, apps, updates

Authentication, Authorization and Accounting for network access

Collaboration
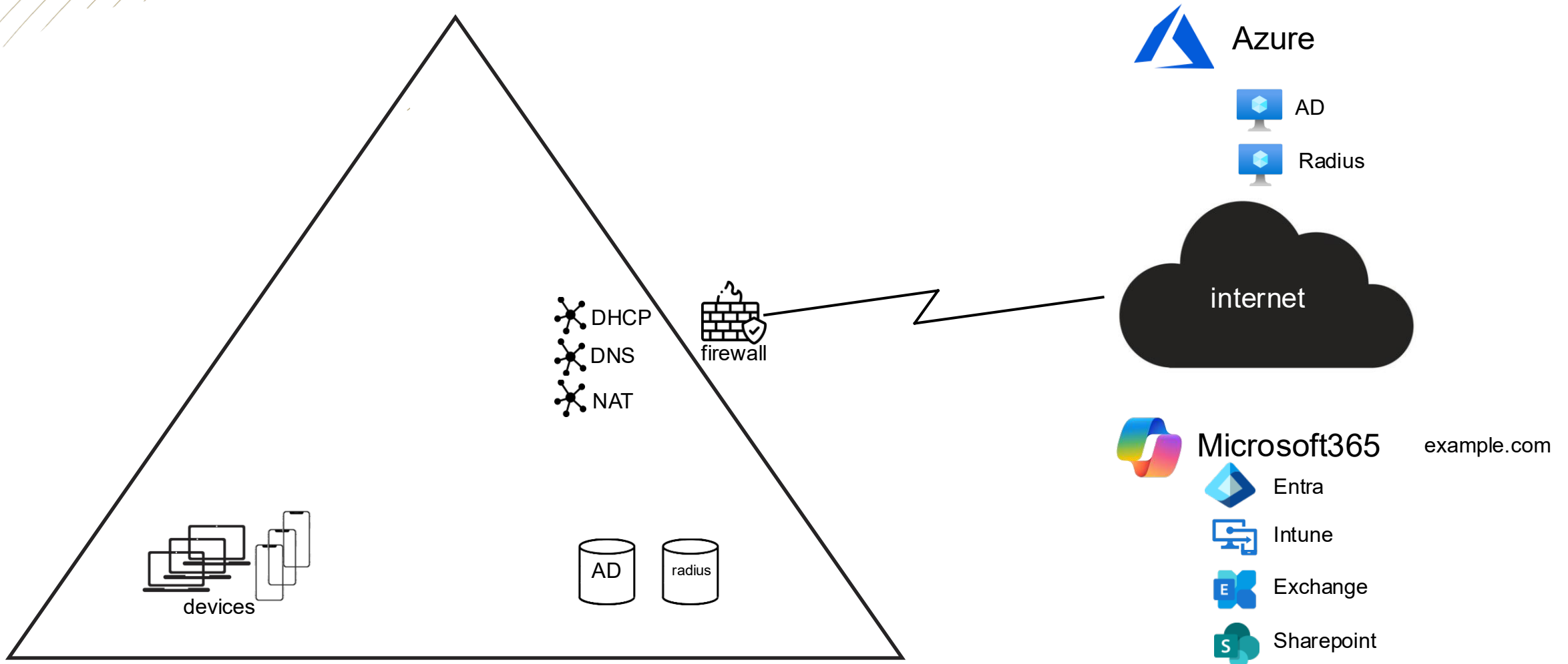
Role - server

Intune

Radius

Teams – Sharepoint M365 apps

Cloud Workplace IT Infrastructure

Cloud Workplace IT infrastructure

Using Microsoft365 Changes daily IT operations

- All services for device and user management are SaaS services, eliminating the need to maintain on-premises infrastructure.

- Permissions are assigned through roles, allowing specific IT tasks (e.g., password reset, MFA reset) to be delegated without full administrative access.

- Intune changes the device hardware lifecycle by enabling zero-touch deployments, allowing IT staff to deliver devices directly to users without manual intervention.

- Company resources (e-mail, files, collaboration platform) are stored in the cloud and use modern authentication (Oauth, MFA), eliminating the need for a VPN to access them.

Cloud Workplace IT infrastructure

Entra ID tenant

Microsoft365
SAAS: license per user

Intune

Exchange Online

Sharepoint

Teams

Office apps

Windows license

+…

Azure
IAAS - PAAS: Pay-per-use

Virtual machines

Virtual networks

NSG

Public IP addresses

Network Security Group

Bastion

+…

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Microsoft365 subscription plans

Item	Personal Data Encryption	Bitlocker
Release of decryption key	At user sign-in via Windows Hello for Business.	At boot
Decryption keys discarded	When user signs out of Windows or one minute after Windows lock screen is engaged.	At shtudown
Protected content	All files in protected folders	Entire volume/drive
Authenticaton to access protected content	Windows Hello For Business	When Bitlocker with TPM + PIN is enabled, Bitlocker PIN plus Windows sign-in

Microsoft365 subscription tier

Subscription tier refers to the level within a subscription plan

Subscription plan	Subscription tier	Description
Enterprise	E1	Web based office apps, email, 1TB OneDrive
Enterprise	E3	E1 + Desktop Office apps + Windows License + Sharepoint + Intune
Enterprise	E5	E3 + Advanced Security Features

Microsoft365 subscription plans

Frontline workers

- Employees who interact directly with customers or are involved in primary daily operations, typically in sectors like retail, healthcare, manufacturing, logistics, hospitality, and construction.

- They usually work outside of an office.

- The Microsoft 365 Frontline Workers subscription includes only essential services and limited cloud storage, offering a more affordable plan.

Microsoft365 subscription plans

Teams no longer included in Microsoft 365 in EU

- The European Commission ruled that Microsoft could no longer bundle Teams with Microsoft 365, citing unfair competition against collaboration platforms like Slack.

- Since October 2023, Microsoft removed Teams to comply with new EU regulations.

- New customers must purchase Teams separately in addition to their Microsoft 365 subscription.

Microsoft365 tenant: CSP

Registering a Microsoft 365 tenant is not done directly but through a Microsoft partner. This partner is known as a Cloud Solution Provider. The CSP is responsible for:
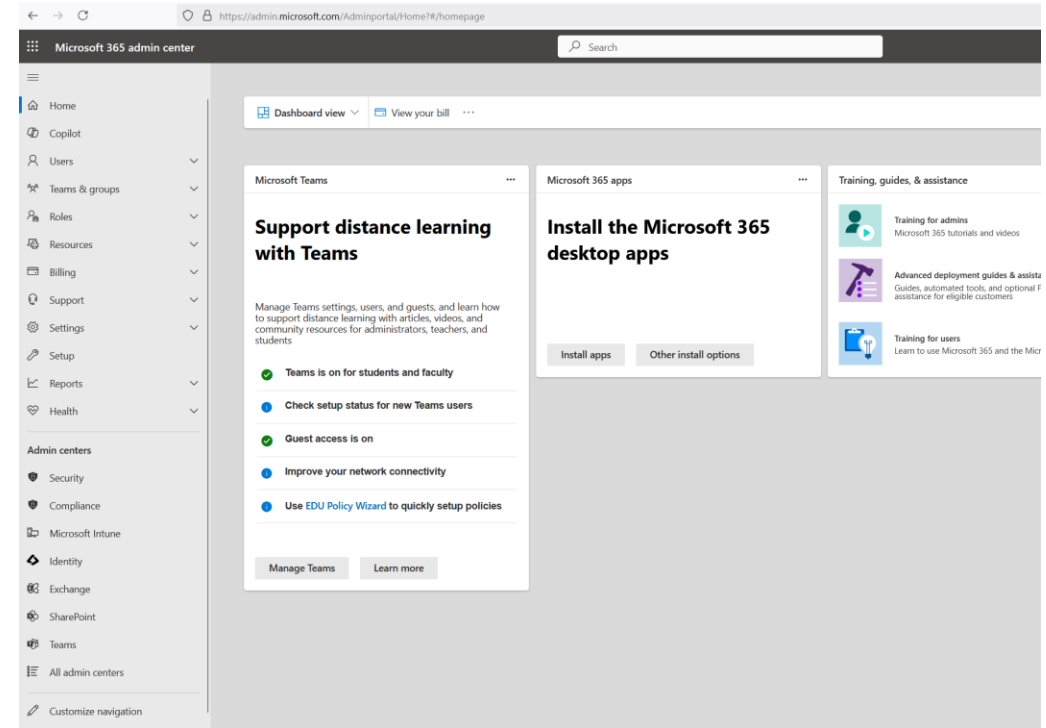
- The initial registration of the Microsoft 365 tenant.

- Acting as the primary point of contact for support and assistance.

- Renewal of the Microsoft 365 subscription

- Having administrative rights to manage Microsoft 365 access

[CSP list](#)

Microsoft365 portal vs admin center
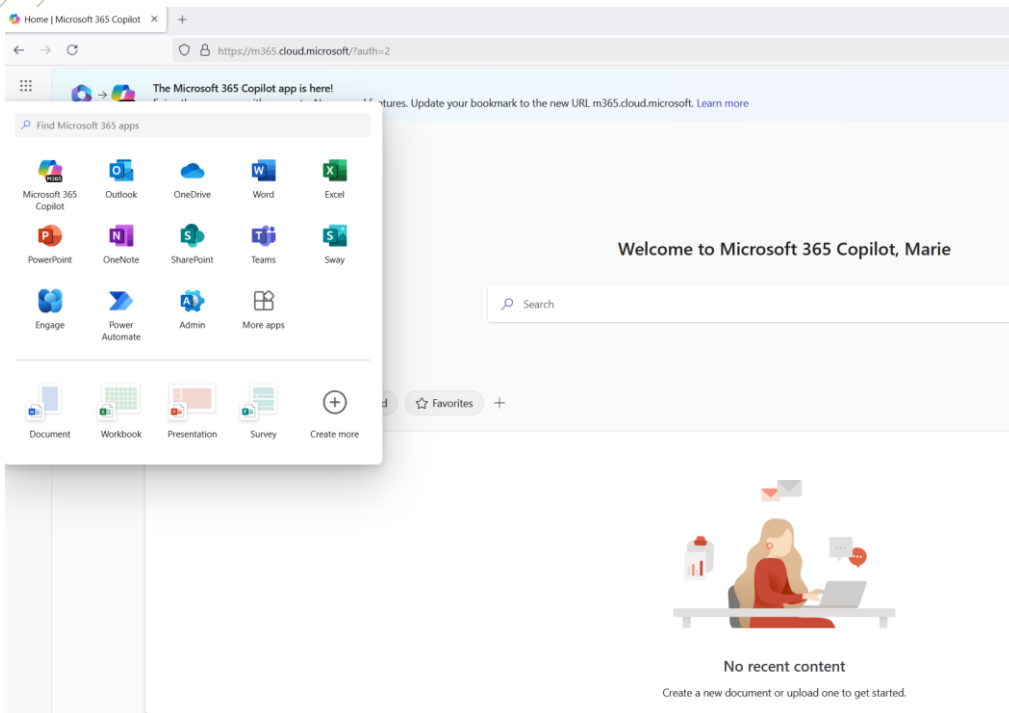

Microsoft365 portaal
End Users

Admin center
Administrators

Microsoft365 Admin center

The **Microsoft 365 Admin Center** is used for the initial setup of the Microsoft365 environment including user management, licenses, and basic settings. More specific configurations are managed in their respective admin centers:

- **Identity:** Microsoft Entra ID for identity and access management, such as authentication, role assignments, and security policies

- **Microsoft Intune:** for device and application management, including enforcing policies, deploying apps and managing endpoints.

- **Exchange:** used to manage email settings, mailboxes, anti-spam policies,…

- **Teams:** configure and manage Teams settings, policies and user permissions for collaboration and communication.

- **Sharepoint:** manage site collections, permissions, storage and sharing settings for Sharepoint Online.
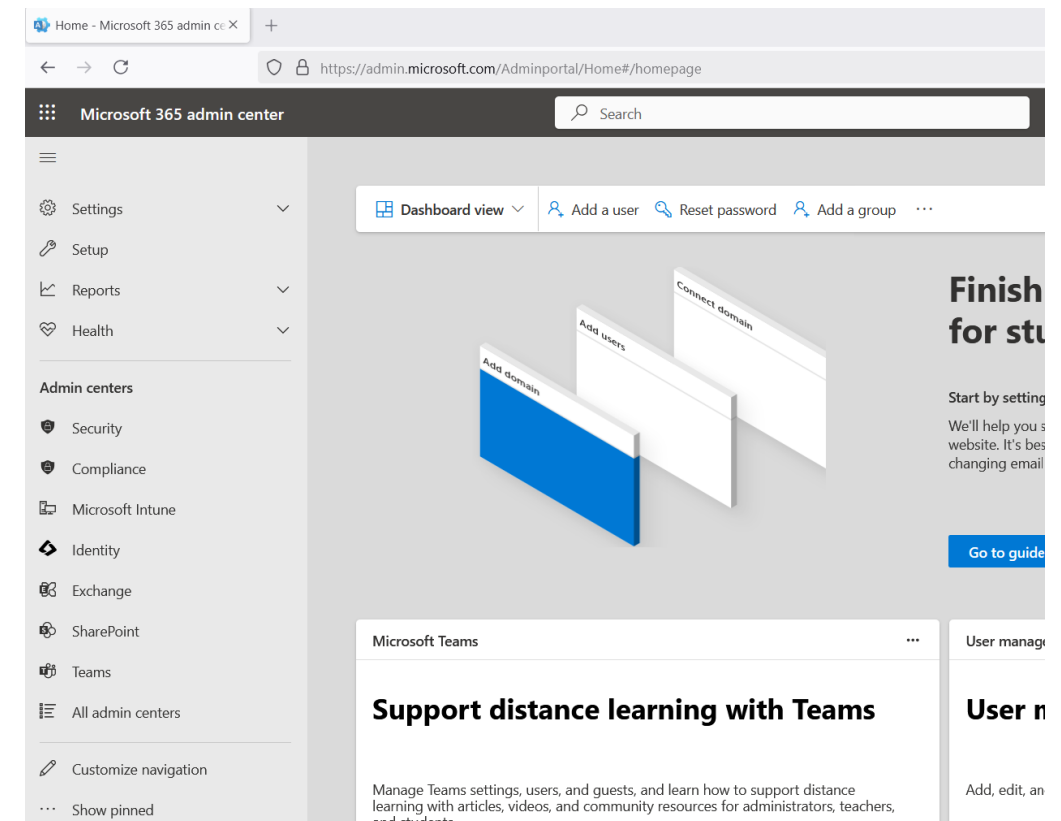
Microsoft365 Admin centers

Service	URL
General Microsoft365 admin center	admin.microsoft.com
Entra	entra.microsoft.com
Endpoint Manager (Intune)	exchange.microsoft.com
Sharepoint	tenantname-admin.sharepoint.com
Teams	admin.teams.Microsoft.com
Security	security.microsoft.com

Microsoft365 Portal URL's

| Service	URL
Microsoft365 Portal	office.com - microsoft365.com - m365.cloud.microsoft.com
Outlook	outlook.office.com
OneDrive	*TenantName*-my.sharepoint.com
Sharepoint	*TenantName*-my.sharepoint.com
Teams	teams.microsoft.com

Microsoft365 Products
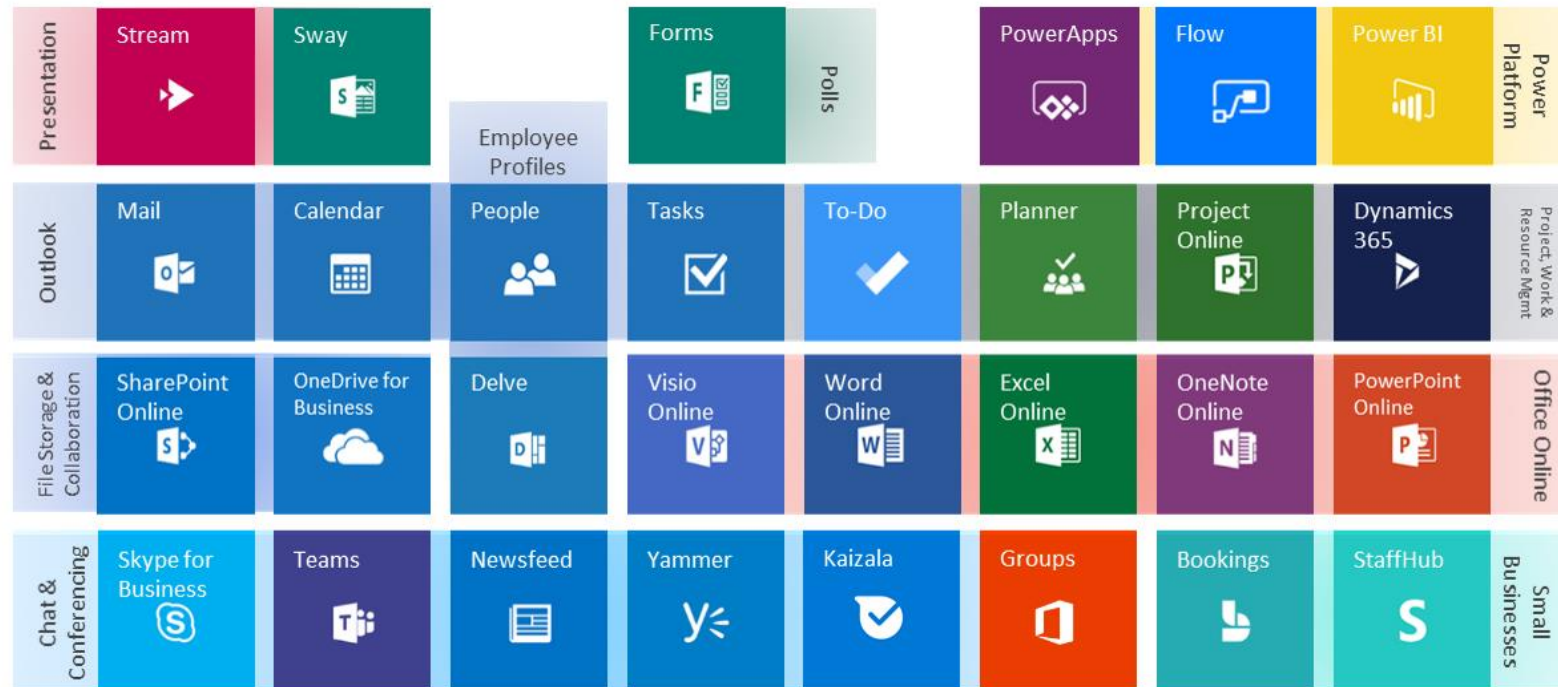
Microsoft 365 includes tools for both environment **management** and **productivity**. Entra, Intune, and SharePoint help with security and administration, while To-Do, Planner, and Yammer improve collaboration. Cloud Advanced will focus on the environment management aspect.

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Lab Environment
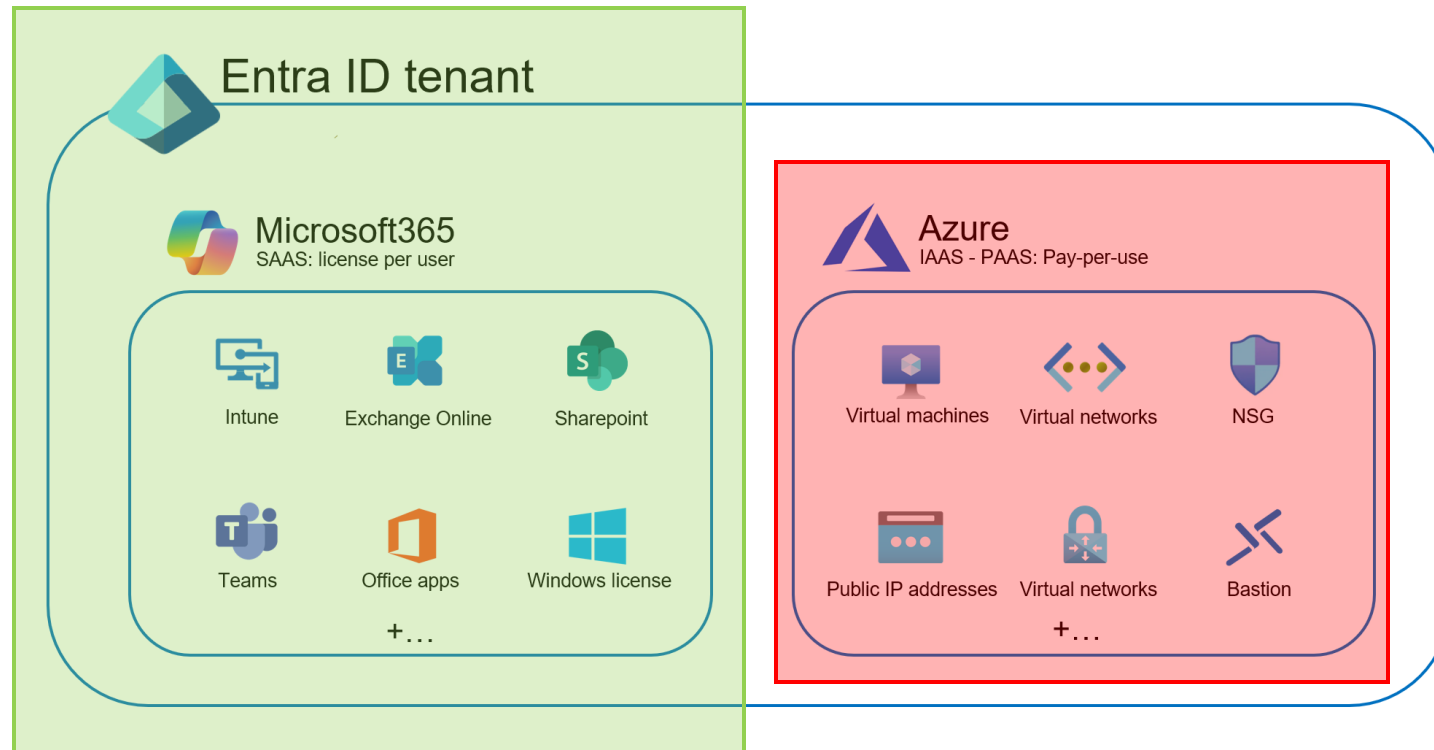
1.Microsoft365 demo tenant
Entra Tenant: demo

2.Azure for students
Entra Tenant: PXL

In a real environment, a single Entra tenant manages both the Microsoft 365 subscription and Azure services, ensuring centralized and consistent authorization. In our lab environment the Entra setup differs between the Microsoft 365 demo tenant and the Azure Environment