Microsoft 365 Multi-Tenant Architecture
July 2025
m365maps.com

Tenants

A tenant is a logical construct where each customer is assigned a unique identifier and encryption keys to tag and secure their data from other tenants in the service. A map of data locations is defined based on sign up geography and Core Online Services contract terms.

Customer A
- Unique customer identifier
- Unique encryption keys
- List of data storage locations
- Core online services data residency in Australia

Customer B
- Unique customer identifier
- Unique encryption keys
- List of data storage locations
- Core online services data residency in Singapore

End Users

Every Microsoft 365 user identity has a unique account ID connected with their home tenant.

User 1 Customer A

User 2 Customer B

Internet

Microsoft Global Network

End users connect to the nearest Microsoft network node over secure, encrypted channels. Data remains tagged to each customer throughout.

Optional Connected Experiences — Some services run in the network, but outside Microsoft 365

Microsoft Network Edge — The global network provides access to Microsoft 365

Microsoft Bing — Bing services add to the Microsoft 365 experience

Microsoft 365 Service

Shared Compute

Connection to the nearest available compute within the Microsoft secure global network. This is usually within the geography of the end user or the data, but varies based on local availability and load balancing requirements. Compute platform is shared by multiple customers.

For example: OneDrive, Teams, or Copilot

Microsoft 365 Service Component

Supporting Azure Components

For example: Video Streaming or Gen-AI Models. Data remains secure within the service

Secure access control and platform intelligence layer

Microsoft Graph

Graph Connectors

For example: Web site content and LOB apps data

Shared Storage

Data is encrypted with customer unique encryption keys and tagged with customer unique identifiers. Location is determined by the individual tenant data map and Core Online Services contract terms. Storage is shared by multiple customers.

Core Online Services Storage

Additional Services Storage

For example: Forms stores data in USA for Singapore

Customer A has Core Online Services data at rest in Australia

Data at Rest in Australia

Data at Rest in Singapore

Customer B has Core Online Services data at rest in Singapore

Related Services

Advanced Data Residency — Service migration and residency for additional workloads

Multi-Geo — Split a tenancy over multiple geographies

Resources

- **Microsoft 365 Data Residency**
- **Microsoft 365 Tenant Isolation**
- **Microsoft Product Terms**