Theory Topics

R&D on storage accounts, Different types of storage accounts and on Azure Active Directory Users, Group Type, License, B2B & B2C. Difference between Active Directory, Azure Active Directory and Azure ADDS

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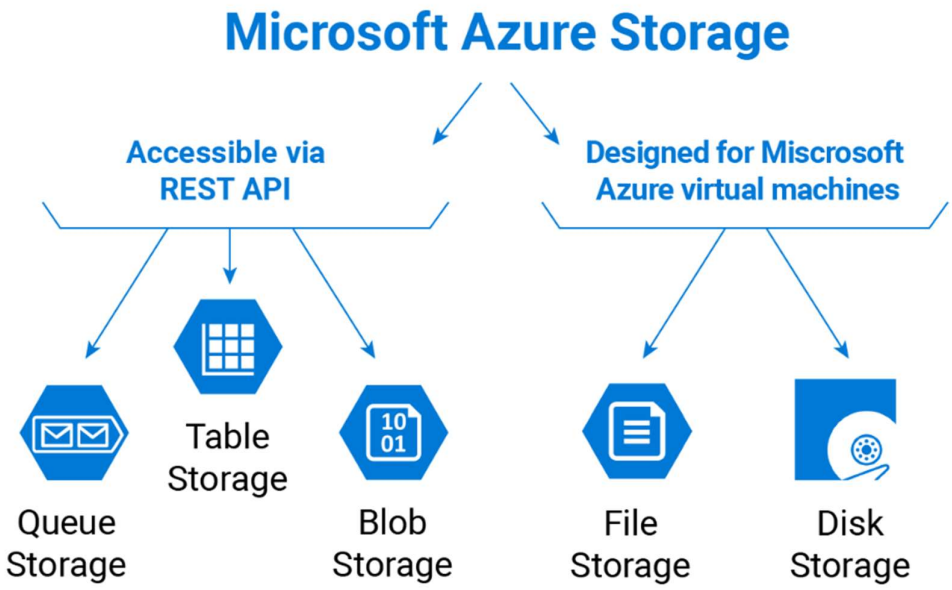
Different Types of Storage Accounts

Introduction

Azure Storage provides scalable and secure cloud storage for a variety of data objects. There are several types of storage accounts available, each optimized for different scenarios.

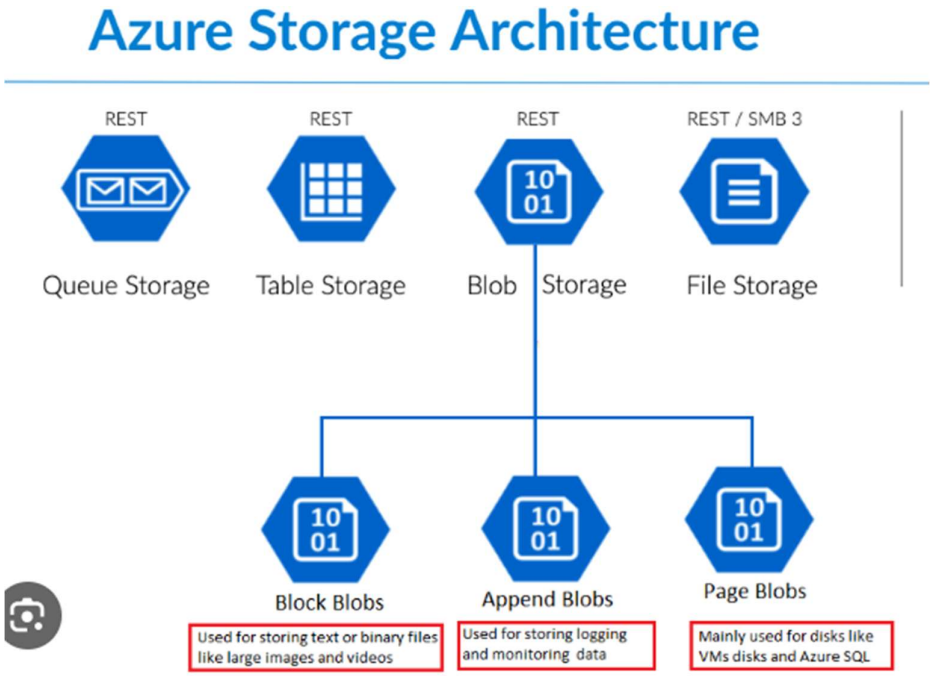


Types of Storage Accounts

1. **General Purpose v2 (GPv2)**
    - **Overview**: The most recent and recommended type for most scenarios.
    - **Features**: Supports all storage services: blobs, files, queues, and tables. Offers the latest features, including hierarchical namespace and hot, cool, and archive access tiers.
    - **Use Cases**: Versatile, suitable for a wide range of applications including web apps, mobile apps, and enterprise solutions.

2. **General Purpose v1 (GPv1)**
    - **Overview**: Older version of general-purpose storage.
    - **Features**: Supports blobs, files, queues, and tables but lacks access tiers.
    - **Use Cases**: Legacy applications that do not require the latest features.

3. **Blob Storage**
    - **Overview**: Specifically optimized for storing unstructured data as blobs (Binary Large Objects).
    - **Features**: Supports hot, cool, and archive access tiers for cost-effective data management.
    - **Use Cases**: Storing documents, images, video files, and backups.



4. **File Storage**
    - **Overview**: Designed for file shares that can be mounted by cloud or on-premises deployments.
    - **Features**: Fully managed file shares in the cloud.
    - **Use Cases**: Lift-and-shift applications, shared storage for legacy applications.
5. **Block Blob Storage**
    - **Overview**: Optimized for high throughput and large-scale workloads.
    - **Features**: High-performance block storage.
    - **Use Cases**: Media files, large data objects, high-volume data ingestion.

6. **Archive Storage**
    - **Overview**: Low-cost storage for infrequently accessed data.
    - **Features**: Data is stored offline and must be rehydrated before access.

- **Use Cases**: Long-term backup, archival of large data sets.

Comparison Table

Storage Account Type	Supported Services	Access Tiers	Use Cases
GPv2	Blobs, Files, Queues, Tables	Hot, Cool, Archive	Web apps, mobile apps, enterprise solutions
GPv1	Blobs, Files, Queues, Tables	None	Legacy applications
Blob Storage	Blobs	Hot, Cool, Archive	Documents, images, videos, backups
File Storage	Files	None	Shared storage for legacy applications
Block Blob Storage	Blobs	Hot, Cool, Archive	Media files, large data objects
Archive Storage	Blobs	Archive	Long-term backup, archival

Conclusion

Choosing the right storage account type depends on the specific needs of your application. GPv2 is recommended for most scenarios due to its versatility and access to the latest features.

References

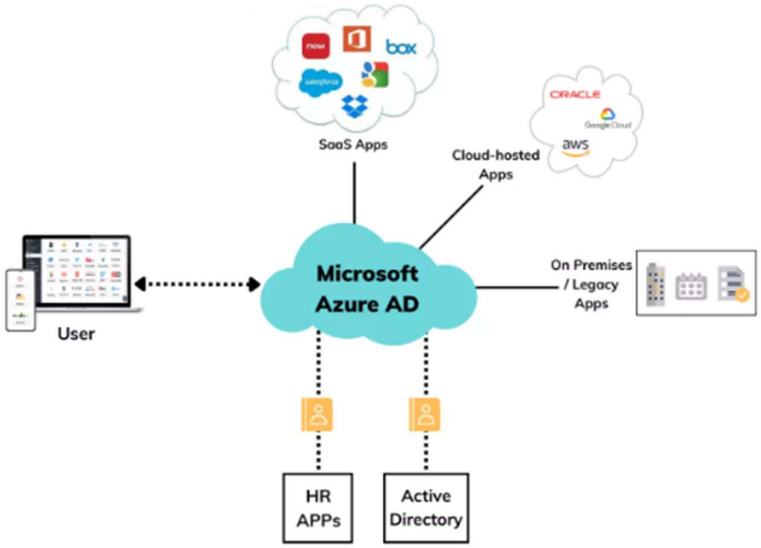
- Microsoft Azure Storage Accounts
- Azure Storage Pricing

Azure Active Directory: Users, Group Type, License, B2B & B2C. Difference between Active Directory, Azure Active Directory, and Azure ADDS

Introduction

Azure Active Directory (Azure AD) is a comprehensive identity and access management cloud solution that provides a robust set of capabilities to manage users, groups, and applications.

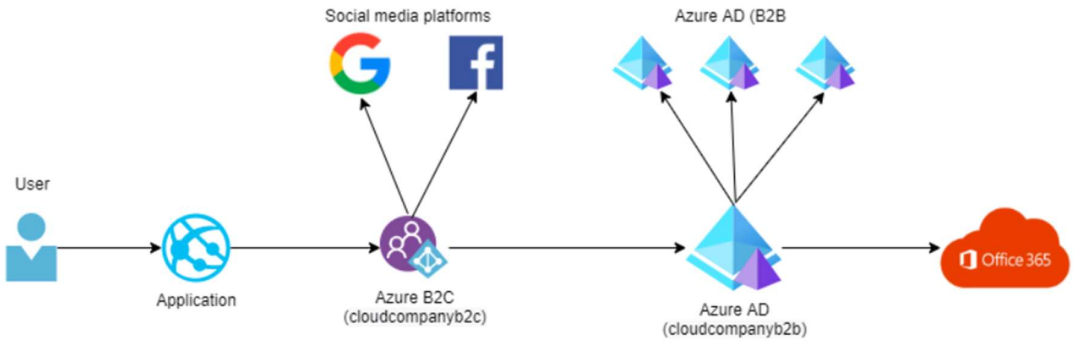
Azure Active Directory Components



1. **Users**
    - **Definition**: Individual identities that can access services and resources.
    - **Features**: Authentication, user profile management, multi-factor authentication (MFA).
2. **Group Types**
    - **Security Groups**: Used to manage member and computer access to shared resources.
    - **Microsoft 365 Groups**: Used to manage access to Microsoft 365 resources.
3. **Licenses**
    - **Free**: Basic features for user and group management.
    - **Basic**: Adds additional features like group-based access management.
    - **Premium P1**: Advanced identity management features, including self-service group management and dynamic groups.

- **Premium P2**: All P1 features plus identity protection and Privileged Identity Management (PIM).

4. **B2B (Business to Business)**
   - **Definition**: Allows external users to access your organization's resources.
   - **Features**: Secure collaboration with external partners, contractors, and suppliers.
5. **B2C (Business to Consumer)**
   - **Definition**: Manages customer identities and allows customers to sign in to applications.
   - **Features**: Customizable user journeys, social account sign-ins, and multi-factor authentication.



Differences Between Active Directory, Azure Active Directory, and Azure ADDS

1. **Active Directory (AD)**
   - **Overview**: On-premises directory service for managing domain resources.
   - **Features**: Centralized authentication and authorization, Group Policy management.
   - **Use Cases**: Traditional enterprise environments.
2. **Azure Active Directory (Azure AD)**
   - **Overview**: Cloud-based identity and access management service.
   - **Features**: Single sign-on (SSO), MFA, device management.
   - **Use Cases**: Modern cloud applications and services.
3. **Azure Active Directory Domain Services (Azure ADDS)**

- **Overview**: Provides managed domain services in Azure.
- **Features**: Domain join, LDAP, Group Policy, and Kerberos/NTLM authentication.
- **Use Cases**: Lift-and-shift applications to Azure without managing AD infrastructure.

Comparison Table

Feature	Active Directory	Azure Active Directory	Azure AD Domain Services
Environment	On-premises	Cloud	Cloud
Authentication	Kerberos, NTLM	OAuth, OpenID Connect	Kerberos, NTLM
Management	Group Policy, AD Users and Computers	Azure Portal, PowerShell	Azure Portal, PowerShell
Use Case	Traditional enterprise	Modern applications	Lift-and-shift to Azure
SSO	No	Yes	Yes
Multi-Factor Authentication	No	Yes	No

Conclusion

Understanding the differences and capabilities of Active Directory, Azure Active Directory, and Azure ADDS is crucial for designing and managing modern identity and access solutions. Azure AD offers robust features for cloud environments, while Azure ADDS helps in seamlessly migrating traditional applications to the cloud.

References

- Microsoft Azure Active Directory
- Azure Active Directory Pricing
- Azure Active Directory Domain Services