

# Compare Active Directory Domain Services to Azure Active Directory

2 minutes

Active Directory Domain Services (AD DS) is the traditional deployment of Windows Server-based Active Directory on a physical or virtual server. Active Directory Domain Services (AD DS) also includes Active Directory Certificate Services (AD CS), Active Directory Lightweight Directory Services (AD LS), Active Directory Federation Services (AD FS), and Active Directory Rights Management Services (AD RMS).

## 📘 Important

Although you can deploy and manage AD DS in Azure Virtual Machines, we recommend you use Azure Active Directory, unless your configuration targets IaaS workloads that depend specifically on AD DS.

## Things to consider when using Azure AD rather than AD DS

Azure AD is similar to AD DS, but there are significant differences. It's important to understand that using Azure AD for your configuration is different from deploying an Active Directory domain controller on an Azure virtual machine and then adding it to your on-premises domain.

As you plan your identity strategy, consider the following characteristics that distinguish Azure AD from AD DS.

- **Identity solution:** AD DS is primarily a directory service, while Azure AD is a full identity solution. Azure AD is designed for internet-based applications that use HTTP and HTTPS communications. The features and capabilities of Azure AD support target strong identity management.
- **Communication protocols:** Because Azure AD is based on HTTP and HTTPS, it doesn't use Kerberos authentication. Azure AD implements HTTP and HTTPS protocols, such as SAML, WS-Federation, and OpenID Connect for authentication (and OAuth for authorization).

- **Federation services:** Azure AD includes federation services, and many third-party services like Facebook.
- **Flat structure:** Azure AD users and groups are created in a flat structure. There are no organizational units (OUs) or group policy objects (GPOs).
- **Managed service:** Azure AD is a managed service. You manage only users, groups, and policies. If you deploy AD DS with virtual machines by using Azure, you manage many other tasks, including deployment, configuration, virtual machines, patching, and other backend processes.

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## Next unit: Select Azure Active Directory editions

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