Abstract:

This application note describes how to use Microsoft Active Directory (AD) service with EonStor GS/GSe systems in Windows Server environments.
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Using Microsoft Active Directory with EonStor GS/GSe

Microsoft Active Directory (AD) in Windows Server environments is a directory service designed for data management and resource distribution in network environments. Network administrators can centrally manage complex account information and different network resources in a unified manner.

Using Microsoft AD with EonStor GS/GSe systems offers the following benefits:

- **Simplified account management**
  
The same Microsoft AD account name and password can be used for EonStor GS/GSe. There is no need to manage separate sets of account information.

- **Consolidated access control**
  
Read/write rights to shared directories on the network can be controlled from the EonOne GUI.

The EonStor GS/GSe systems are compatible with Microsoft AD with the following versions of Windows OS:

- Windows Server 2008, 2008 R2
- Windows Server 2012, 2012 R2
- Windows Server 2016
Preparing the Environment

Step 1: Time setting

The EonStor GS/GSe and AD server should be synchronized, with a time difference of no more than 5 minutes. To check the date/time settings of the EonStor GS/GSe, go to Main menu > Settings > Device > System > Time > Current time > Change in the EonOne GUI.

We recommend users should synchronize the date and time with the NTP (Network Time Protocol) server. Enter the IP address of the network time server, specify the polling period and Apply the settings.
Step 2: Check channel connection

Make sure at least one file-level channel is connected. **For the redundant model, the channels on both controller A and controller B must be connected.**

Go to Settings > Device > Channel & Network in the EonOne GUI.

Step 3: Check IP address of AD & DNS

In the AD server, go to Server Manager > AD DS to check the AD IP address and go to Server Manager > DNS to check the DNS IP address.
Adding AD Server to EonStor GS/GSe

Step 1: Add DNS server

In the EonOne GUI, go to Settings > Device > Access > Network services > DNS
Enter the IP address of DNS to add.

Step 2: Join EonStor GS/GSe to a Windows AD server

In the EonOne GUI, go to Settings > Device > Privilege > AD/LDAP.
Select Windows Active Directory and enter the information of the AD domain.
**AD server**
The IP address or the domain name of the AD server. For example, IP Address: 172.24.110.25, Domain Name: test.com

**AD Security**
Specifies how the system will communicate with the AD server. You can select none or an encrypted connection with TLS.

**Username**
Admin username of AD server.

**Password**
Admin Password of AD server.

Click “Fetch”. The Domain Controller and DC Address will show up. In some situations, such as forest architecture, there may be more than one Domain Controller in the same AD server. Select one Domain Controller of the AD server and specify the IP address if the domain controller has more than one IP address. Remember to save the settings.

**Note**

1. If administrator changes the password of the AD server, the connection between the AD server and EonStor GS/GSe will operate normally until the EonStor GS/GSe reset system. In this situation, we recommend to re-join EonStor GS/GSe to the AD server with updating passwords before resetting system to ensure that all the functions are working properly.

2. If there is firewall between EonStor GS/GSe and AD server, please follow the link to To configure your firewall before joining AD.

Step 3: Check the settings

In the EonOne GUI, go to Settings > Device > Privilege > Users or User groups and select Domain users or Domain group to check that the EonStor GS/GSe has been joined to the Active Directory successfully.
Step 4: Update user list

The system will automatically synchronize the user list with the directory server periodically. If you don’t see a newly added user, you can click the "Update User List" button on the AD/LDAP page to update manually.
Allowing Users to Access Folders

Step 1: Enable network service

Make sure network service has been enabled. Here we use CIFS/SMB for example. Go to Settings > Device > Access > Network services > CIFS/SMB in the EonOne GUI.

![Network Service Configuration](image)

Step 2: Edit access rights of shared folders

Go to Settings > Device > Privilege > Shared folders in the EonOne GUI. Add or Edit a folder and select the Privilege page to set up from Domain user or Domain group.

![Folder Access Rights](image)
Step 3: Access to shared folders

To login the NAS via Windows Explorer with “\Data port IP address”, use "Domain name\Username" as the login name.