## Installing NetBIOS Enumerator.

NetBIOS is an acronym that stands for Network Basic Input Output System. It enables computer communication over a LAN and the sharing of files and printers. TCP/IP network devices are identified using NetBIOS names (Windows). It must be network-unique and limited to 16 characters, with 15 reserved for the device name and the 16th reserved for identifying the type of service running or name record type.

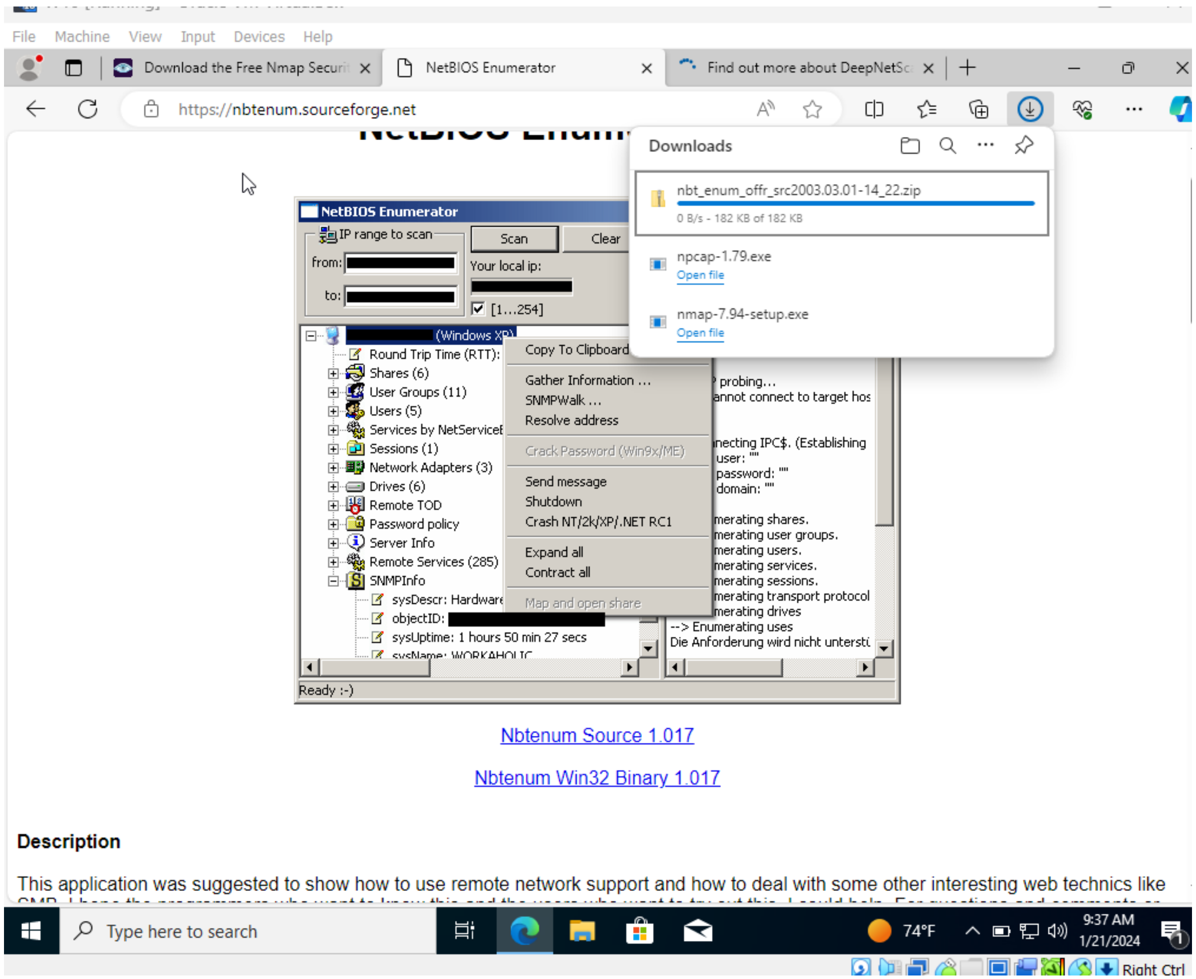
### Uses of NetBIOS Enumeration:

An attacker who discovers a Windows OS with port 139 open can investigate what resources are accessible or viewable on the remote system. To enumerate the NetBIOS names, the remote system must have file and printer sharing enabled. Depending on the availability of shares, NetBIOS enumeration may allow an attacker to read or write to the remote computer system or launch a (Dos).

### NetBIOS Enumeration Tools:

NetBIOS's enumeration tools explore and scan the network for security loopholes or flaws in networked systems within a given range of IP addresses and computer lists. In addition, these tools list the operating system, users, password policies, groups, service packs and hotfixes, services, NetBIOS shares, discs, transmits, sessions, SIDs and security event logs.

Reference: [https://www.geeksforgeeks.org/what-is-netbios-enumeration/](https://www.geeksforgeeks.org/what-is-netbios-enumeration/)



https://nbtenum.sourceforge.net

nbt_enum_offr_src2003.03.01-14_22.zip
0 B/s - 182 KB of 182 KB

npcap-1.79.exe
Open file

nmap-7.94-setup.exe
Open file

from: [redacted]
to: [redacted]
Your local ip: [redacted]
☑ [1...254]

```
[redacted] (Windows XP)
  Round Trip Time (RTT):
  Shares (6)
  User Groups (11)
  Users (5)
  Services by NetServiceE
  Sessions (1)
  Network Adapters (3)
  Drives (6)
  Remote TOD
  Password policy
  Server Info
  Remote Services (285)
  SNMPInfo
    sysDescr: Hardware
    objectID: [redacted]
    sysUptime: 1 hours 50 min 27 secs
    sysName: WORKAHOLIC
```

```
? probing...
annot connect to target hos

nnecting IPC$. (Establishing
 user: ""
 password: ""
 domain: ""

merating shares.
merating user groups.
merating users.
merating services.
merating sessions.
merating transport protocol
merating drives
--> Enumerating uses
Die Anforderung wird nicht unterstü
```

Ready :-)

[Nbtenum Source 1.017]()

[Nbtenum Win32 Binary 1.017]()

**Description**

This application was suggested to show how to use remote network support and how to deal with some other interesting web technics like

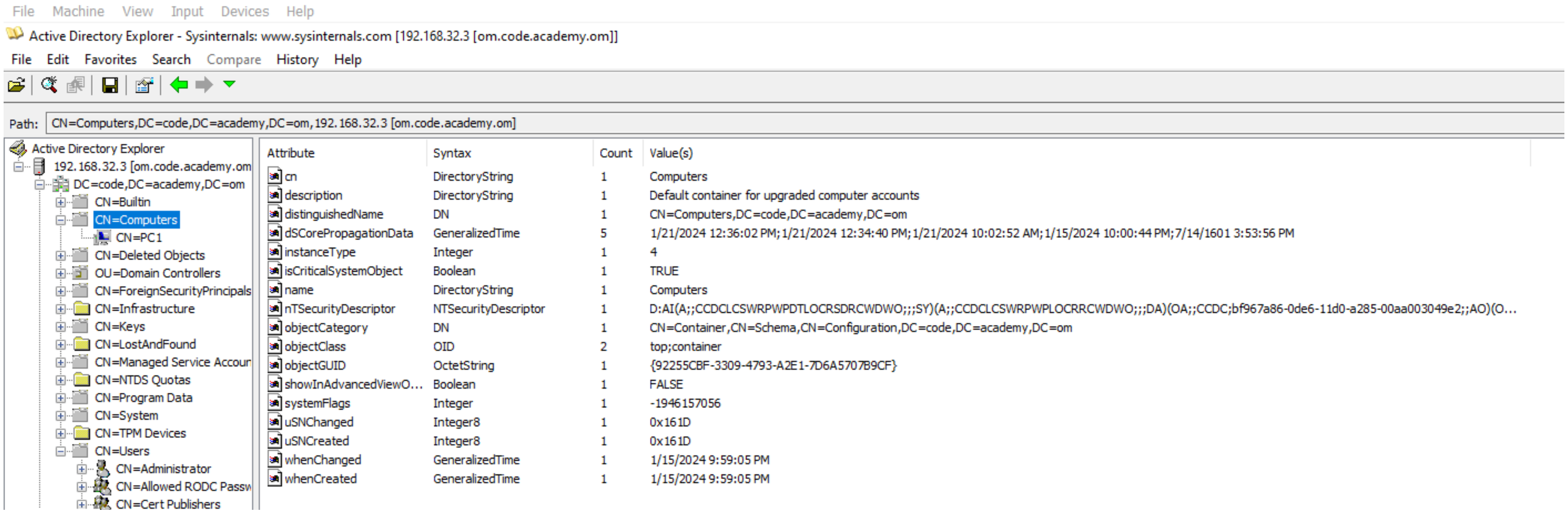
## Installing Active Directory Explorer

Active Directory Explorer (AD Explorer) is an advanced Active Directory (AD) viewer and editor. You can use AD Explorer to easily navigate an AD database, define favorite locations, view object properties and attributes without having to open dialog boxes, edit permissions, view an object's schema, and execute sophisticated searches that you can save and re-execute.

AD Explorer also includes the ability to save snapshots of an AD database for off-line viewing and comparisons. When you load a saved snapshot, you can navigate and explore it as you would a live database. If you have two snapshots of an AD database you can use AD Explorer's comparison functionality to see what objects, attributes and security permissions changed between them.

Reference: [https://learn.microsoft.com/en-us/sysinternals/downloads/adexplorer](https://learn.microsoft.com/en-us/sysinternals/downloads/adexplorer)

**Note: installed the software in Windows 10 Added to the Domain. Checked the following: Computers, Users, Domain Zones, Forests.**

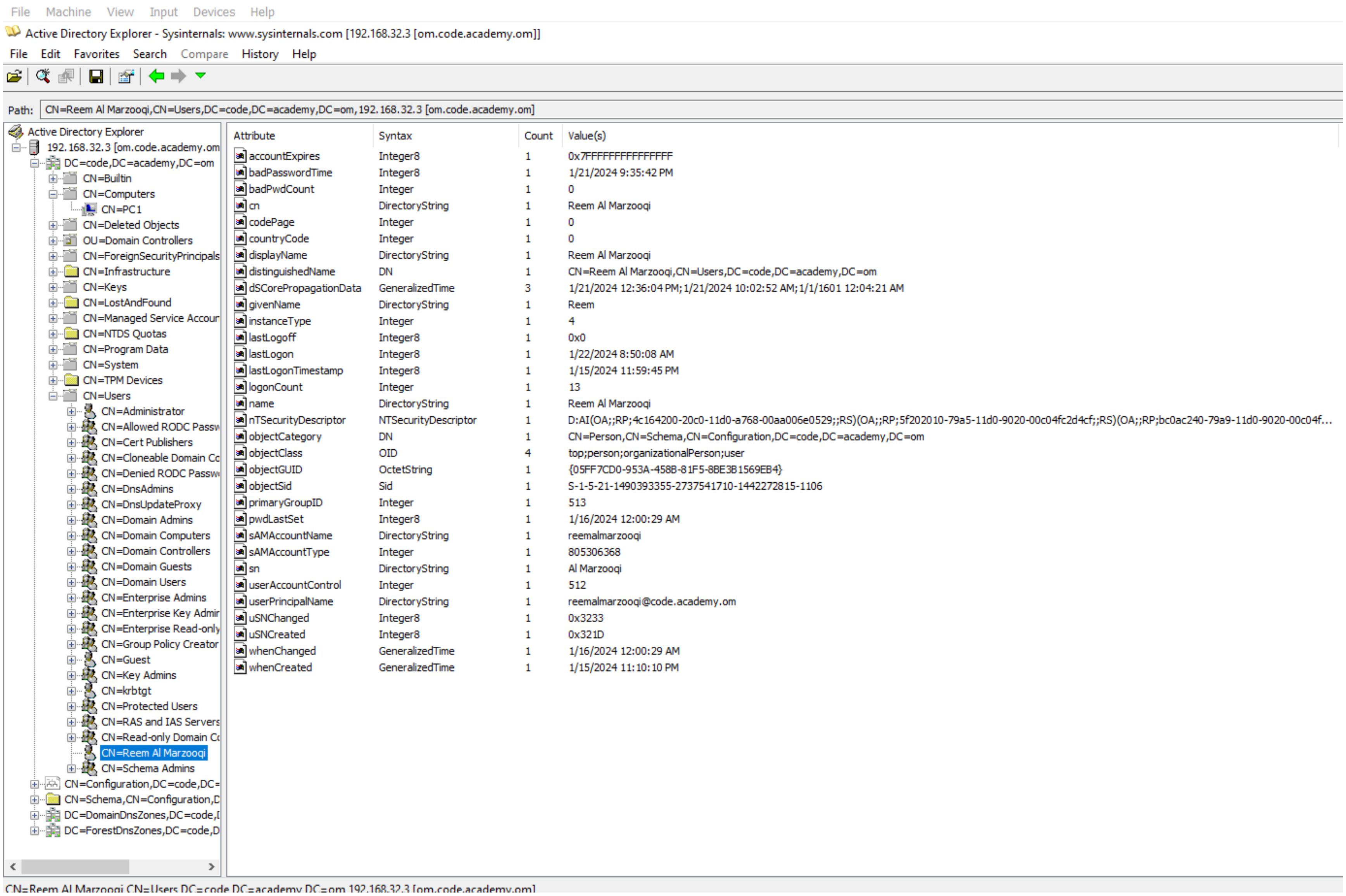

File Machine View Input Devices Help
File Edit Favorites Search Compare History Help

Active Directory Explorer - Sysinternals: www.sysinternals.com [192.168.32.3 [om.code.academy.om]]

Path: CN=Computers,DC=code,DC=academy,DC=om,192.168.32.3 [om.code.academy.om]

```
Active Directory Explorer
  192.168.32.3 [om.code.academy.om
    DC=code,DC=academy,DC=om
      CN=Builtin
      CN=Computers
        CN=PC1
      CN=Deleted Objects
      OU=Domain Controllers
      CN=ForeignSecurityPrincipals
      CN=Infrastructure
      CN=Keys
      CN=LostAndFound
      CN=Managed Service Accour
      CN=NTDS Quotas
      CN=Program Data
      CN=System
      CN=TPM Devices
      CN=Users
        CN=Administrator
        CN=Allowed RODC Passw
        CN=Cert Publishers
```

| Attribute | Syntax | Count | Value(s) |
|---|---|---|---|
| cn | DirectoryString | 1 | Computers |
| description | DirectoryString | 1 | Default container for upgraded computer accounts |
| distinguishedName | DN | 1 | CN=Computers,DC=code,DC=academy,DC=om |
| dSCorePropagationData | GeneralizedTime | 5 | 1/21/2024 12:36:02 PM;1/21/2024 12:34:40 PM;1/21/2024 10:02:52 AM;1/15/2024 10:00:44 PM;7/14/1601 3:53:56 PM |
| instanceType | Integer | 1 | 4 |
| isCriticalSystemObject | Boolean | 1 | TRUE |
| name | DirectoryString | 1 | Computers |
| nTSecurityDescriptor | NTSecurityDescriptor | 1 | D:AI(A;;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;SY)(A;;CCDCLCSWRPWPLOCRRCWDWO;;;DA)(OA;;CCDC;bf967a86-0de6-11d0-a285-00aa003049e2;;AO)(O... |
| objectCategory | DN | 1 | CN=Container,CN=Schema,CN=Configuration,DC=code,DC=academy,DC=om |
| objectClass | OID | 2 | top;container |
| objectGUID | OctetString | 1 | {92255CBF-3309-4793-A2E1-7D6A5707B9CF} |
| showInAdvancedViewO... | Boolean | 1 | FALSE |
| systemFlags | Integer | 1 | -1946157056 |
| uSNChanged | Integer8 | 1 | 0x161D |
| uSNCreated | Integer8 | 1 | 0x161D |
| whenChanged | GeneralizedTime | 1 | 1/15/2024 9:59:05 PM |
| whenCreated | GeneralizedTime | 1 | 1/15/2024 9:59:05 PM |


File Machine View Input Devices Help
File Edit Favorites Search Compare History Help

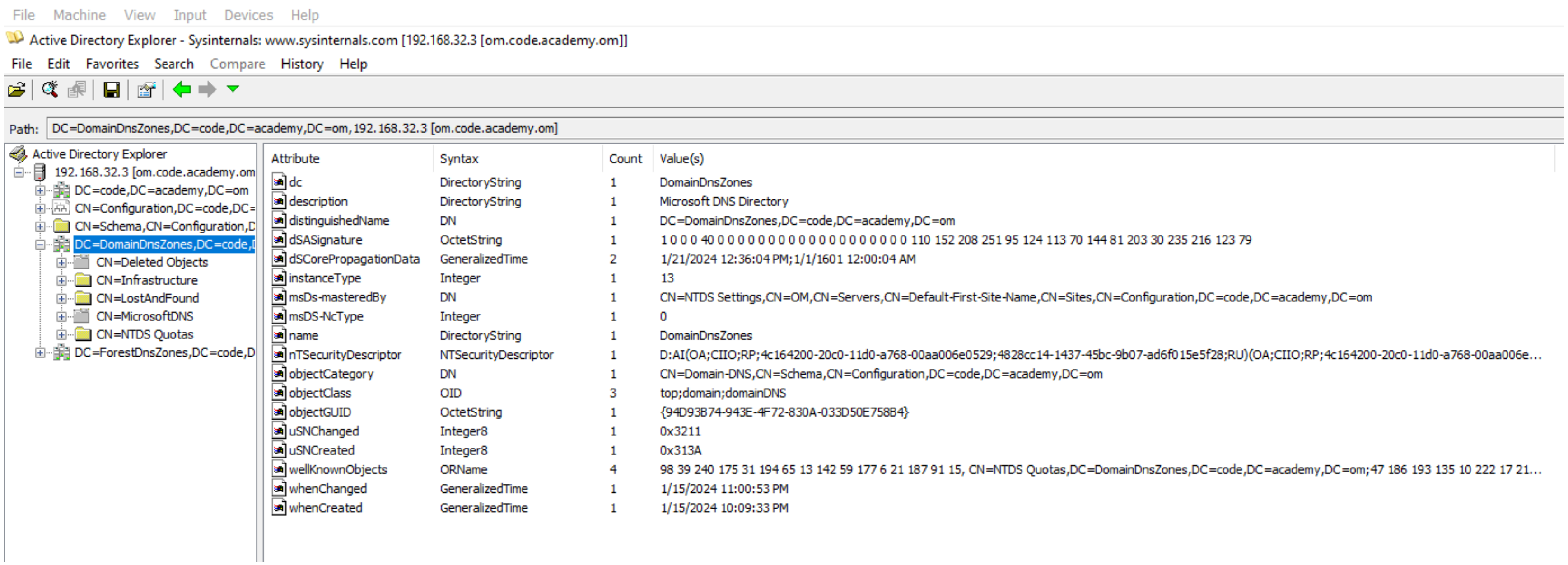
Active Directory Explorer - Sysinternals: www.sysinternals.com [192.168.32.3 [om.code.academy.om]]

Path: CN=Reem Al Marzooqi,CN=Users,DC=code,DC=academy,DC=om,192.168.32.3 [om.code.academy.om]

```
Active Directory Explorer
  192.168.32.3 [om.code.academy.om
    DC=code,DC=academy,DC=om
      CN=Builtin
      CN=Computers
        CN=PC1
      CN=Deleted Objects
      OU=Domain Controllers
      CN=ForeignSecurityPrincipals
      CN=Infrastructure
      CN=Keys
      CN=LostAndFound
      CN=Managed Service Accour
      CN=NTDS Quotas
      CN=Program Data
      CN=System
      CN=TPM Devices
      CN=Users
        CN=Administrator
        CN=Allowed RODC Passw
        CN=Cert Publishers
        CN=Cloneable Domain Cc
        CN=Denied RODC Passw
        CN=DnsAdmins
        CN=DnsUpdateProxy
        CN=Domain Admins
        CN=Domain Computers
        CN=Domain Controllers
        CN=Domain Guests
        CN=Domain Users
        CN=Enterprise Admins
        CN=Enterprise Key Admir
        CN=Enterprise Read-only
        CN=Group Policy Creator
        CN=Guest
        CN=Key Admins
        CN=krbtgt
        CN=Protected Users
        CN=RAS and IAS Servers
        CN=Read-only Domain Cc
        CN=Reem Al Marzooqi
        CN=Schema Admins
    CN=Configuration,DC=code,DC=
    CN=Schema,CN=Configuration,D
    DC=DomainDnsZones,DC=code,[
    DC=ForestDnsZones,DC=code,D
```

| Attribute | Syntax | Count | Value(s) |
|---|---|---|---|
| accountExpires | Integer8 | 1 | 0x7FFFFFFFFFFFFFFF |
| badPasswordTime | Integer8 | 1 | 1/21/2024 9:35:42 PM |
| badPwdCount | Integer | 1 | 0 |
| cn | DirectoryString | 1 | Reem Al Marzooqi |
| codePage | Integer | 1 | 0 |
| countryCode | Integer | 1 | 0 |
| displayName | DirectoryString | 1 | Reem Al Marzooqi |
| distinguishedName | DN | 1 | CN=Reem Al Marzooqi,CN=Users,DC=code,DC=academy,DC=om |
| dSCorePropagationData | GeneralizedTime | 3 | 1/21/2024 12:36:04 PM;1/21/2024 10:02:52 AM;1/1/1601 12:04:21 AM |
| givenName | DirectoryString | 1 | Reem |
| instanceType | Integer | 1 | 4 |
| lastLogoff | Integer8 | 1 | 0x0 |
| lastLogon | Integer8 | 1 | 1/22/2024 8:50:08 AM |
| lastLogonTimestamp | Integer8 | 1 | 1/15/2024 11:59:45 PM |
| logonCount | Integer | 1 | 13 |
| name | DirectoryString | 1 | Reem Al Marzooqi |
| nTSecurityDescriptor | NTSecurityDescriptor | 1 | D:AI(OA;;RP;4c164200-20c0-11d0-a768-00aa006e0529;;RS)(OA;;RP;5f202010-79a5-11d0-9020-00c04fc2d4cf;;RS)(OA;;RP;bc0ac240-79a9-11d0-9020-00c04f... |
| objectCategory | DN | 1 | CN=Person,CN=Schema,CN=Configuration,DC=code,DC=academy,DC=om |
| objectClass | OID | 4 | top;person;organizationalPerson;user |
| objectGUID | OctetString | 1 | {05FF7CD0-953A-458B-81F5-8BE3B1569EB4} |
| objectSid | Sid | 1 | S-1-5-21-1490393355-2737541710-1442272815-1106 |
| primaryGroupID | Integer | 1 | 513 |
| pwdLastSet | Integer8 | 1 | 1/16/2024 12:00:29 AM |
| sAMAccountName | DirectoryString | 1 | reemalmarzooqi |
| sAMAccountType | Integer | 1 | 805306368 |
| sn | DirectoryString | 1 | Al Marzooqi |
| userAccountControl | Integer | 1 | 512 |
| userPrincipalName | DirectoryString | 1 | reemalmarzooqi@code.academy.om |
| uSNChanged | Integer8 | 1 | 0x3233 |
| uSNCreated | Integer8 | 1 | 0x321D |
| whenChanged | GeneralizedTime | 1 | 1/16/2024 12:00:29 AM |
| whenCreated | GeneralizedTime | 1 | 1/15/2024 11:10:10 PM |

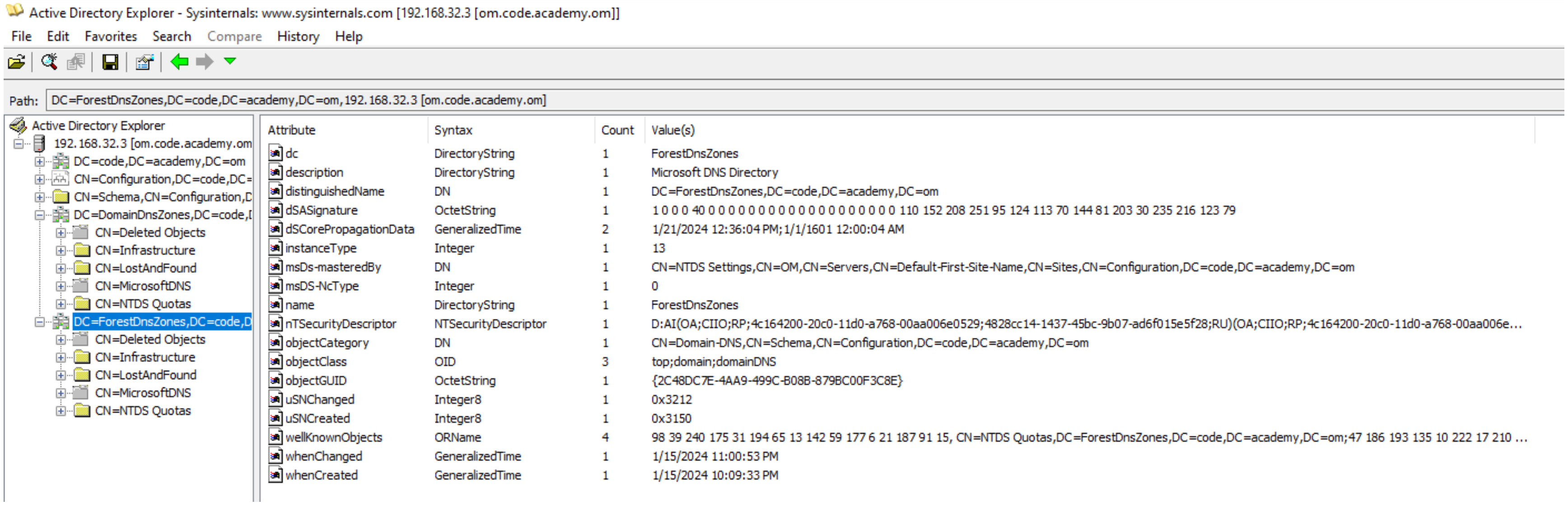
CN=Reem Al Marzooqi CN=Users DC=code DC=academy DC=om 192.168.32.3 [om.code.academy.om]


File Machine View Input Devices Help
Active Directory Explorer - Sysinternals: www.sysinternals.com [192.168.32.3 [om.code.academy.om]]
File Edit Favorites Search Compare History Help

Path: DC=DomainDnsZones,DC=code,DC=academy,DC=om,192.168.32.3 [om.code.academy.om]

```
Active Directory Explorer
  192.168.32.3 [om.code.academy.om
    DC=code,DC=academy,DC=om
    CN=Configuration,DC=code,DC=
    CN=Schema,CN=Configuration,D
    DC=DomainDnsZones,DC=code,I
      CN=Deleted Objects
      CN=Infrastructure
      CN=LostAndFound
      CN=MicrosoftDNS
      CN=NTDS Quotas
    DC=ForestDnsZones,DC=code,D
```

| Attribute | Syntax | Count | Value(s) |
|---|---|---|---|
| dc | DirectoryString | 1 | DomainDnsZones |
| description | DirectoryString | 1 | Microsoft DNS Directory |
| distinguishedName | DN | 1 | DC=DomainDnsZones,DC=code,DC=academy,DC=om |
| dSASignature | OctetString | 1 | 1 0 0 0 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 110 152 208 251 95 124 113 70 144 81 203 30 235 216 123 79 |
| dSCorePropagationData | GeneralizedTime | 2 | 1/21/2024 12:36:04 PM;1/1/1601 12:00:04 AM |
| instanceType | Integer | 1 | 13 |
| msDs-masteredBy | DN | 1 | CN=NTDS Settings,CN=OM,CN=Servers,CN=Default-First-Site-Name,CN=Sites,CN=Configuration,DC=code,DC=academy,DC=om |
| msDS-NcType | Integer | 1 | 0 |
| name | DirectoryString | 1 | DomainDnsZones |
| nTSecurityDescriptor | NTSecurityDescriptor | 1 | D:AI(OA;CIIO;RP;4c164200-20c0-11d0-a768-00aa006e0529;4828cc14-1437-45bc-9b07-ad6f015e5f28;RU)(OA;CIIO;RP;4c164200-20c0-11d0-a768-00aa006e... |
| objectCategory | DN | 1 | CN=Domain-DNS,CN=Schema,CN=Configuration,DC=code,DC=academy,DC=om |
| objectClass | OID | 3 | top;domain;domainDNS |
| objectGUID | OctetString | 1 | {94D93B74-943E-4F72-830A-033D50E758B4} |
| uSNChanged | Integer8 | 1 | 0x3211 |
| uSNCreated | Integer8 | 1 | 0x313A |
| wellKnownObjects | ORName | 4 | 98 39 240 175 31 194 65 13 142 59 177 6 21 187 91 15, CN=NTDS Quotas,DC=DomainDnsZones,DC=code,DC=academy,DC=om;47 186 193 135 10 222 17 21... |
| whenChanged | GeneralizedTime | 1 | 1/15/2024 11:00:53 PM |
| whenCreated | GeneralizedTime | 1 | 1/15/2024 10:09:33 PM |


Active Directory Explorer - Sysinternals: www.sysinternals.com [192.168.32.3 [om.code.academy.om]]
File Edit Favorites Search Compare History Help

Path: DC=ForestDnsZones,DC=code,DC=academy,DC=om,192.168.32.3 [om.code.academy.om]

```
Active Directory Explorer
  192.168.32.3 [om.code.academy.om
    DC=code,DC=academy,DC=om
    CN=Configuration,DC=code,DC=
    CN=Schema,CN=Configuration,D
    DC=DomainDnsZones,DC=code,I
      CN=Deleted Objects
      CN=Infrastructure
      CN=LostAndFound
      CN=MicrosoftDNS
      CN=NTDS Quotas
    DC=ForestDnsZones,DC=code,D
      CN=Deleted Objects
      CN=Infrastructure
      CN=LostAndFound
      CN=MicrosoftDNS
      CN=NTDS Quotas
```

| Attribute | Syntax | Count | Value(s) |
|---|---|---|---|
| dc | DirectoryString | 1 | ForestDnsZones |
| description | DirectoryString | 1 | Microsoft DNS Directory |
| distinguishedName | DN | 1 | DC=ForestDnsZones,DC=code,DC=academy,DC=om |
| dSASignature | OctetString | 1 | 1 0 0 0 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 110 152 208 251 95 124 113 70 144 81 203 30 235 216 123 79 |
| dSCorePropagationData | GeneralizedTime | 2 | 1/21/2024 12:36:04 PM;1/1/1601 12:00:04 AM |
| instanceType | Integer | 1 | 13 |
| msDs-masteredBy | DN | 1 | CN=NTDS Settings,CN=OM,CN=Servers,CN=Default-First-Site-Name,CN=Sites,CN=Configuration,DC=code,DC=academy,DC=om |
| msDS-NcType | Integer | 1 | 0 |
| name | DirectoryString | 1 | ForestDnsZones |
| nTSecurityDescriptor | NTSecurityDescriptor | 1 | D:AI(OA;CIIO;RP;4c164200-20c0-11d0-a768-00aa006e0529;4828cc14-1437-45bc-9b07-ad6f015e5f28;RU)(OA;CIIO;RP;4c164200-20c0-11d0-a768-00aa006e... |
| objectCategory | DN | 1 | CN=Domain-DNS,CN=Schema,CN=Configuration,DC=code,DC=academy,DC=om |
| objectClass | OID | 3 | top;domain;domainDNS |
| objectGUID | OctetString | 1 | {2C48DC7E-4AA9-499C-B08B-879BC00F3C8E} |
| uSNChanged | Integer8 | 1 | 0x3212 |
| uSNCreated | Integer8 | 1 | 0x3150 |
| wellKnownObjects | ORName | 4 | 98 39 240 175 31 194 65 13 142 59 177 6 21 187 91 15, CN=NTDS Quotas,DC=ForestDnsZones,DC=code,DC=academy,DC=om;47 186 193 135 10 222 17 210 ... |
| whenChanged | GeneralizedTime | 1 | 1/15/2024 11:00:53 PM |
| whenCreated | GeneralizedTime | 1 | 1/15/2024 10:09:33 PM |