Microsoft Entra Connect

Document Purpose:

This document provides guidance on configuring and creating custom synchronization rules using the Entra Connect Synchronization Rule Editor. It includes practical test examples to demonstrate how to define, modify, and apply custom sync rules effectively. The purpose is to support administrators in managing directory synchronization scenarios by offering a hands-on reference for using the Sync Rule Editor tool within Entra Connect.

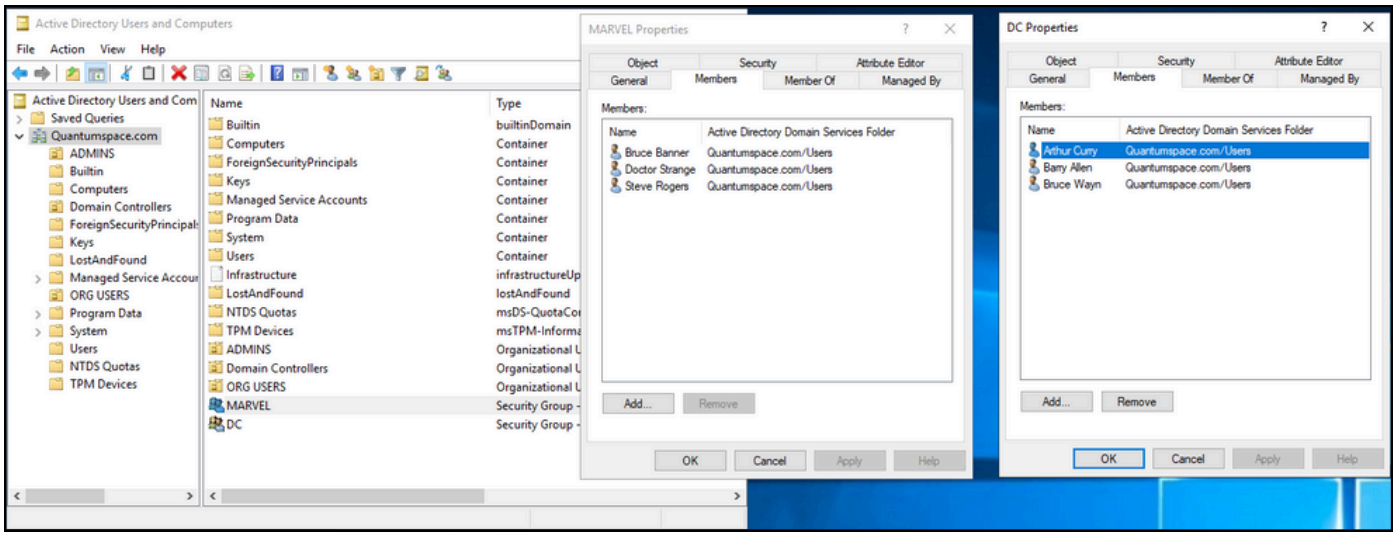
Prepared By: Sakshi Singh

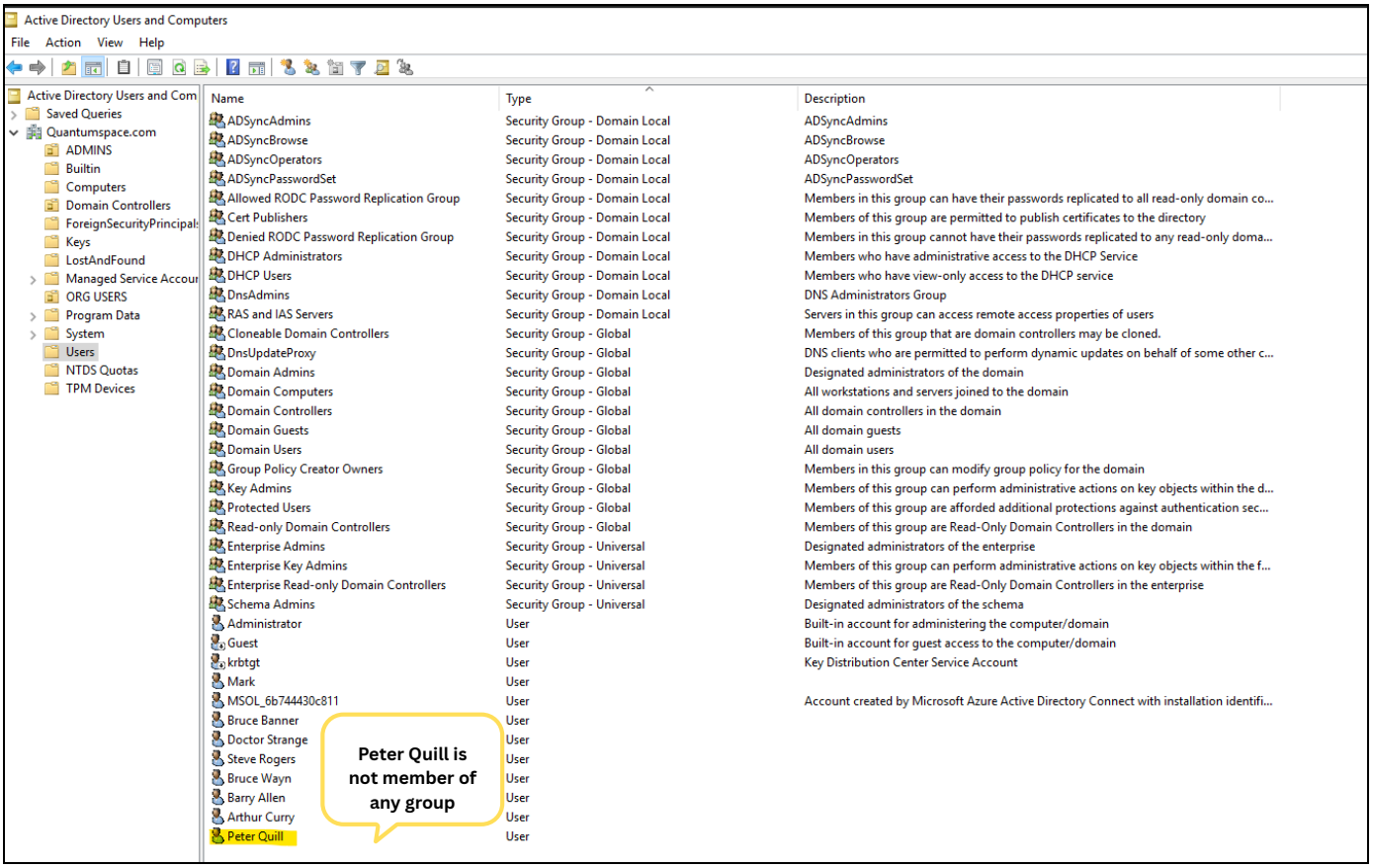
Topics:

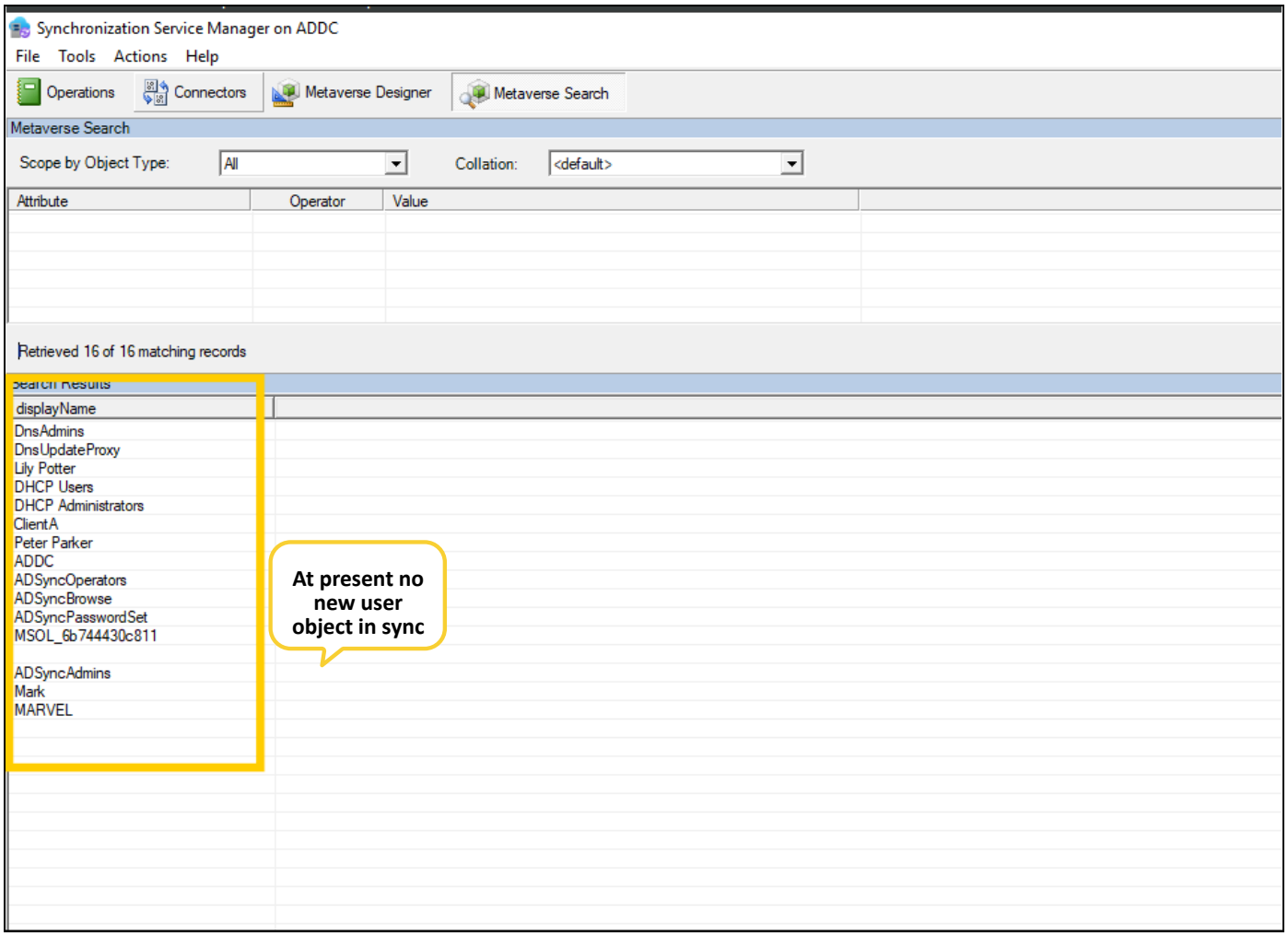
- How to create custom sync rules
- Filtering based on groups
- Filtering based on Attributes
- Attribute flow mapping

Members of specific group should not be synced to Microsoft Entra ID

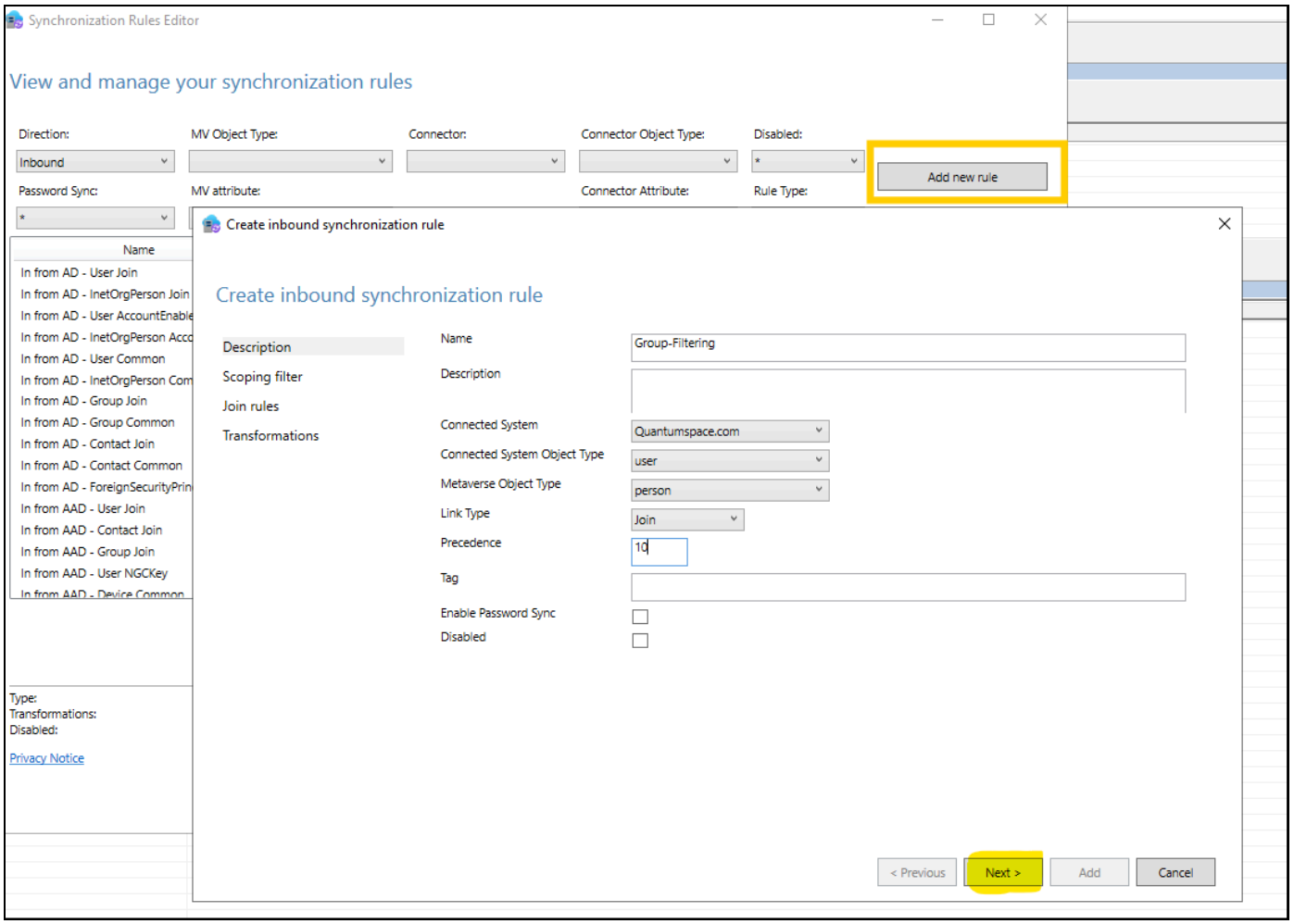
- In below example, we have two groups: MARVEL & DC. Our motive is to not syn members of this group to Entra ID, whereas sync all the other user objects.

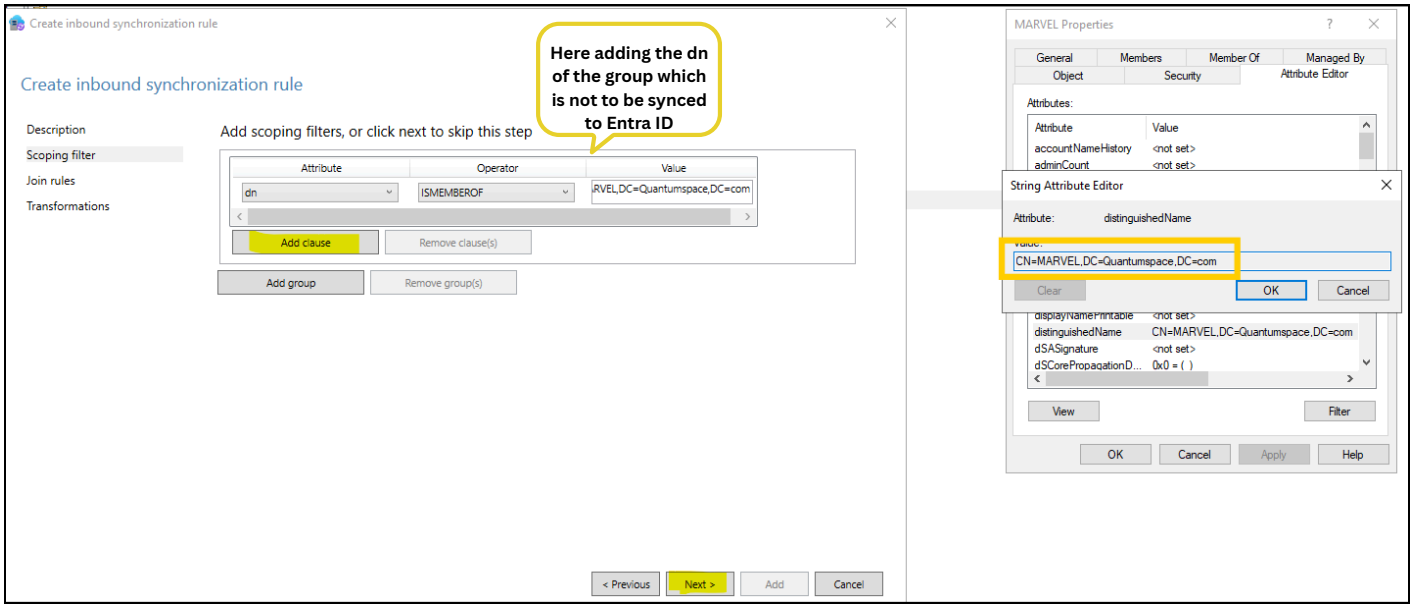


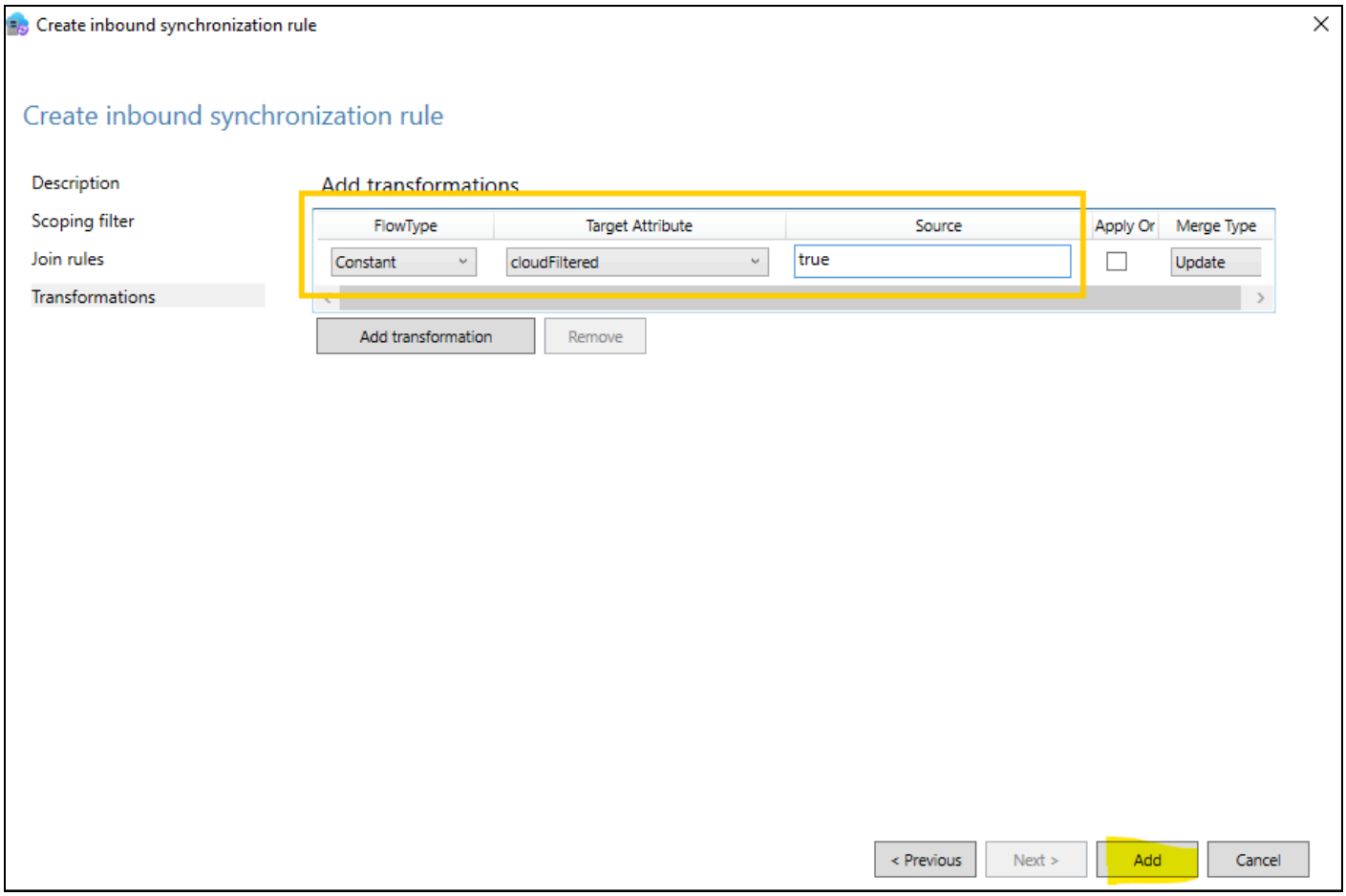




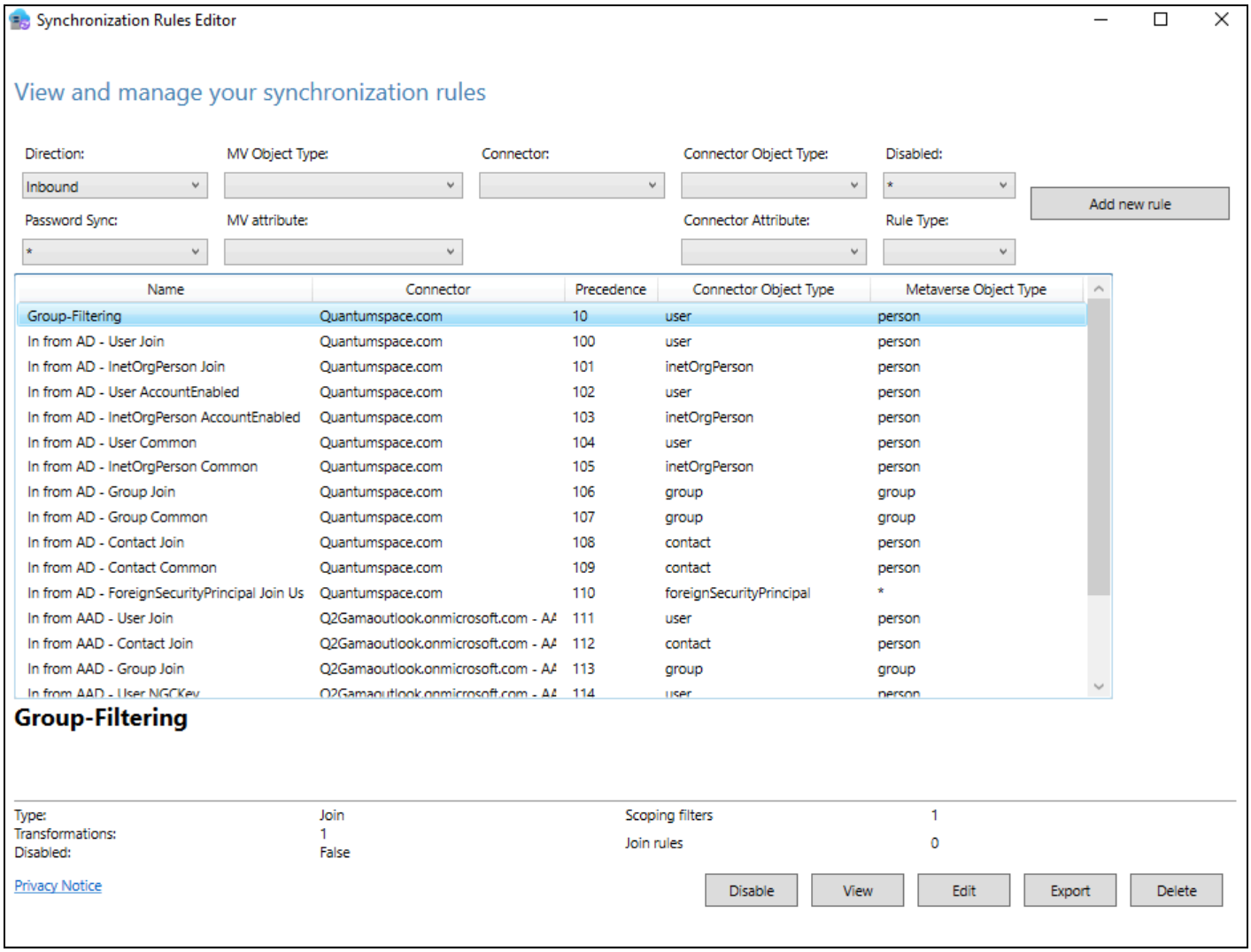
- Open Synchronization rule editor and select Add new rule.

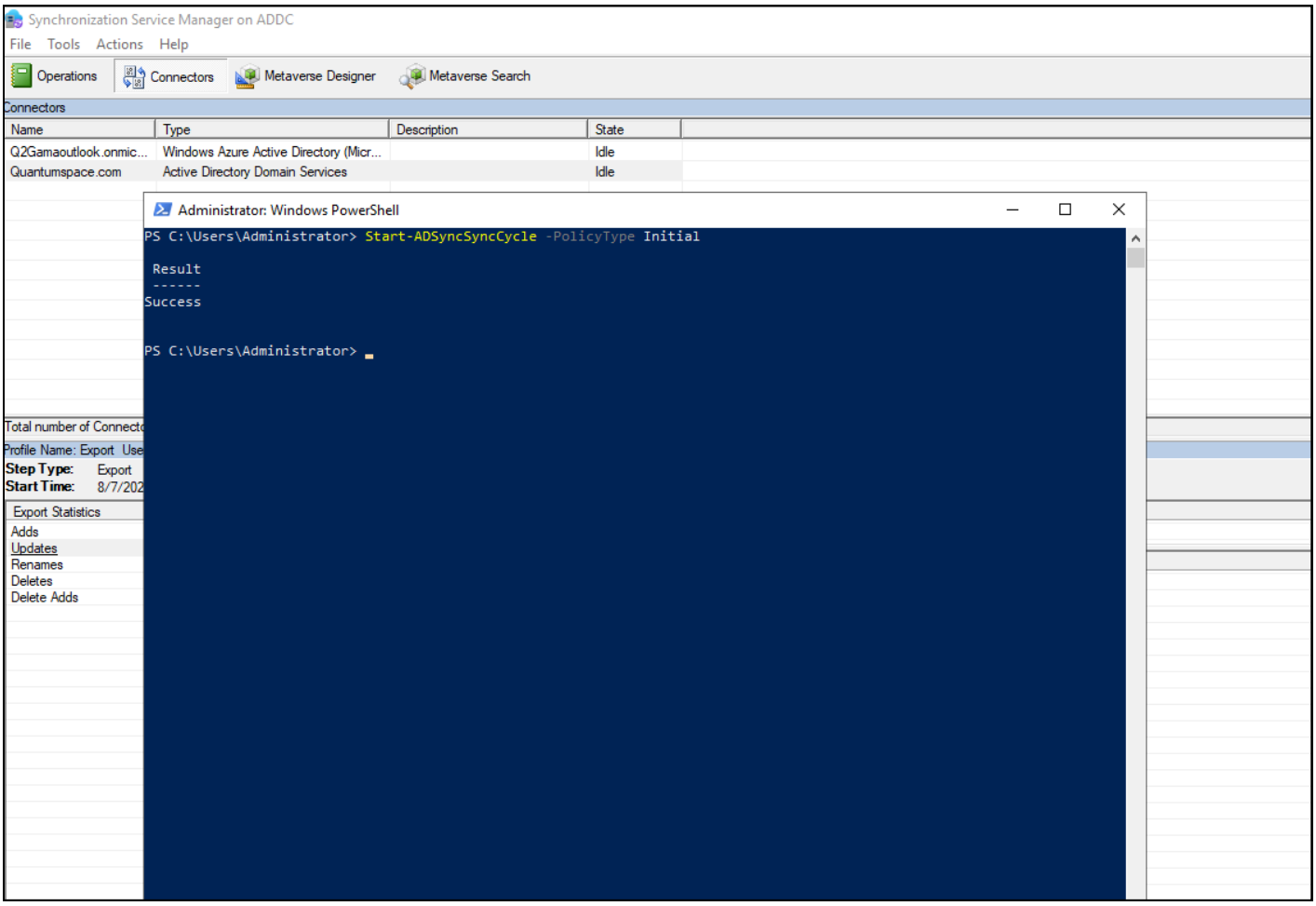

Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
Password Sync:
MV attribute:
Connector Attribute:
Rule Type:
Add new rule
Name
In from AD - User Join
In from AD - InetOrgPerson Join
In from AD - User AccountEnable
In from AD - InetOrgPerson Acco
In from AD - User Common
In from AD - InetOrgPerson Com
In from AD - Group Join
In from AD - Group Common
In from AD - Contact Join
In from AD - Contact Common
In from AD - ForeignSecurityPrin
In from AAD - User Join
In from AAD - Contact Join
In from AAD - Group Join
In from AAD - User NGCKey
In from AAD - Device Common
Type:
Transformations:
Disabled:
Privacy Notice
Create inbound synchronization rule
Create inbound synchronization rule
Description
Scoping filter
Join rules
Transformations
Name
Group-Filtering
Description
Connected System
Quantumspace.com
Connected System Object Type
user
Metaverse Object Type
person
Link Type
Join
Precedence
10
Tag
Enable Password Sync
Disabled
< Previous
Next >
Add
Cancel

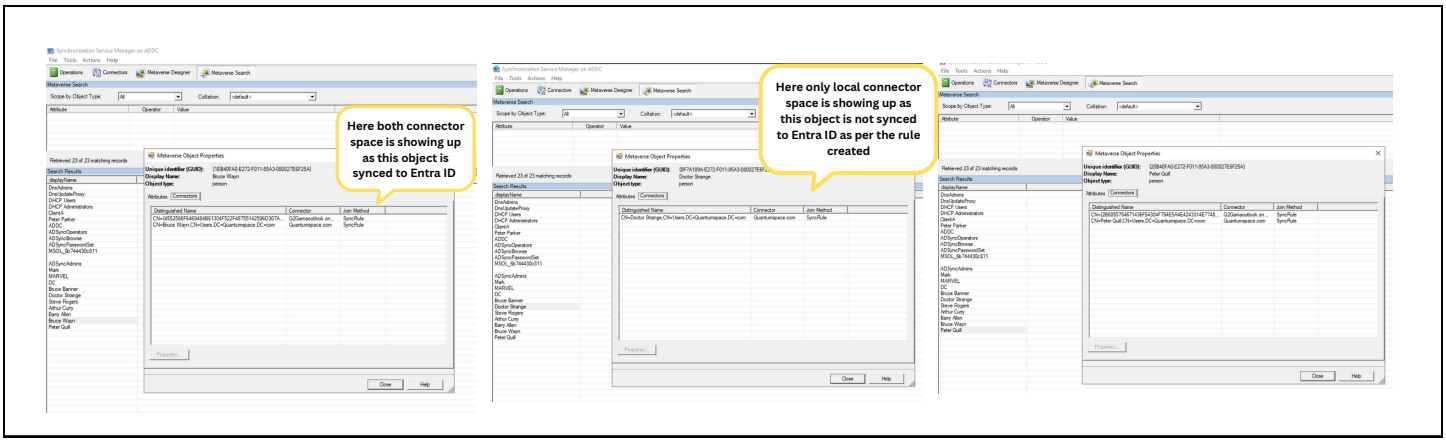

Create inbound synchronization rule
Create inbound synchronization rule
Here adding the dn of the group which is not to be synced to Entra ID
Description
Scoping filter
Join rules
Transformations
Add scoping filters, or click next to skip this step
Attribute
Operator
Value
dn
ISMEMBEROF
RVEL,DC=Quantumspace,DC=com
Add clause
Remove clause(s)
Add group
Remove group(s)
< Previous
Next >
Add
Cancel
MARVEL Properties
General
Members
Member Of
Managed By
Object
Security
Attribute Editor
Attributes:
Attribute
Value
accountNameHistory
<not set>
adminCount
<not set>
String Attribute Editor
Attribute:
distinguishedName
CN=MARVEL,DC=Quantumspace,DC=com
Clear
OK
Cancel
distinguishedName
CN=MARVEL,DC=Quantumspace,DC=com
dSASignature
<not set>
dSCorePropagationD...
0x0 = ( )
View
Filter
OK
Cancel
Apply
Help

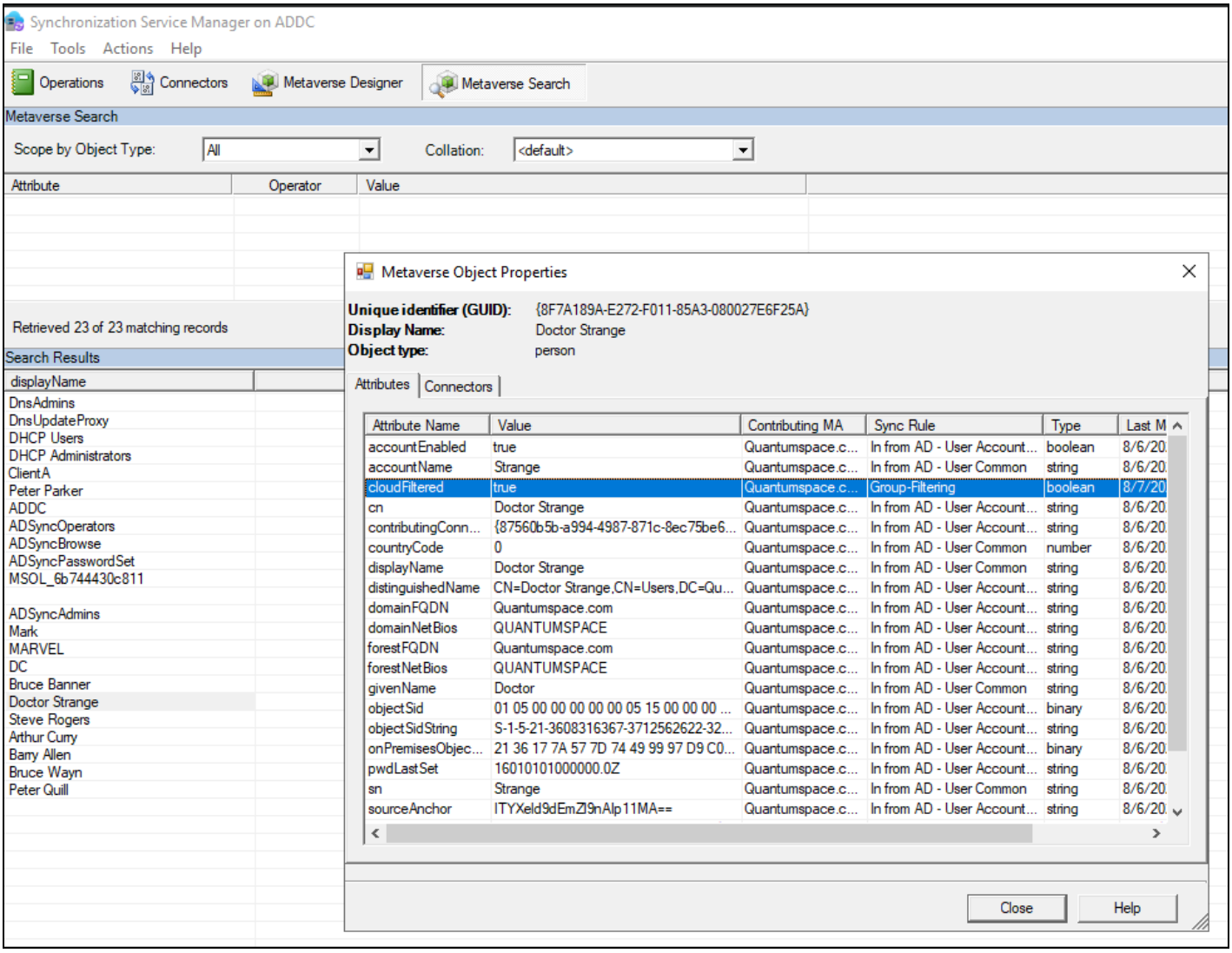


- The rule is now added, run a full synchronization to check the users of ‘MARVEL’ group should not be synced to Entra ID, whereas users of ‘DC’ group and other users will be synced successfully.


Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Add new rule
Password Sync:
*
MV attribute:
Connector Attribute:
Rule Type:
Name
Connector
Precedence
Connector Object Type
Metaverse Object Type
Group-Filtering Quantumspace.com 10 user person
In from AD - User Join Quantumspace.com 100 user person
In from AD - InetOrgPerson Join Quantumspace.com 101 inetOrgPerson person
In from AD - User AccountEnabled Quantumspace.com 102 user person
In from AD - InetOrgPerson AccountEnabled Quantumspace.com 103 inetOrgPerson person
In from AD - User Common Quantumspace.com 104 user person
In from AD - InetOrgPerson Common Quantumspace.com 105 inetOrgPerson person
In from AD - Group Join Quantumspace.com 106 group group
In from AD - Group Common Quantumspace.com 107 group group
In from AD - Contact Join Quantumspace.com 108 contact person
In from AD - Contact Common Quantumspace.com 109 contact person
In from AD - ForeignSecurityPrincipal Join Us Quantumspace.com 110 foreignSecurityPrincipal *
In from AAD - User Join Q2Gamaoutlook.onmicrosoft.com - AA 111 user person
In from AAD - Contact Join Q2Gamaoutlook.onmicrosoft.com - AA 112 contact person
In from AAD - Group Join Q2Gamaoutlook.onmicrosoft.com - AA 113 group group
Group-Filtering
Type: Join
Transformations: 1
Disabled: False
Scoping filters 1
Join rules 0
Privacy Notice
Disable
View
Edit
Export
Delete

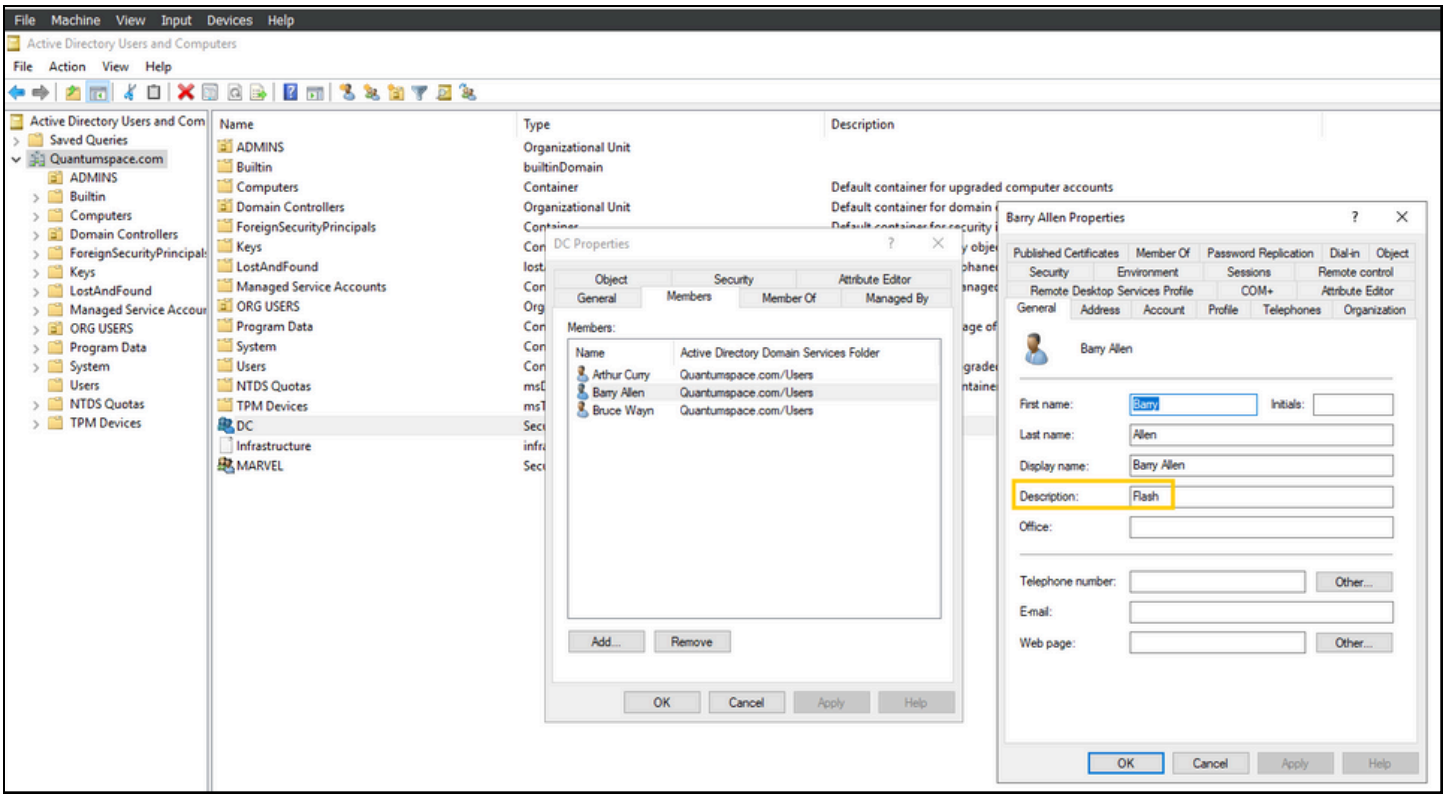

Synchronization Service Manager on ADDC
File Tools Actions Help
Operations
Connectors
Metaverse Designer
Metaverse Search
Connectors
Name Type Description State
Q2Gamaoutlook.onmic... Windows Azure Active Directory (Micr... Idle
Quantumspace.com Active Directory Domain Services Idle
Administrator: Windows PowerShell
PS C:\Users\Administrator> Start-ADSyncSyncCycle -PolicyType Initial
Result
Success
PS C:\Users\Administrator>
Step Type: Export
Start Time: 8/7/202
Export Statistics
Adds
Updates
Renames
Deletes
Delete Adds



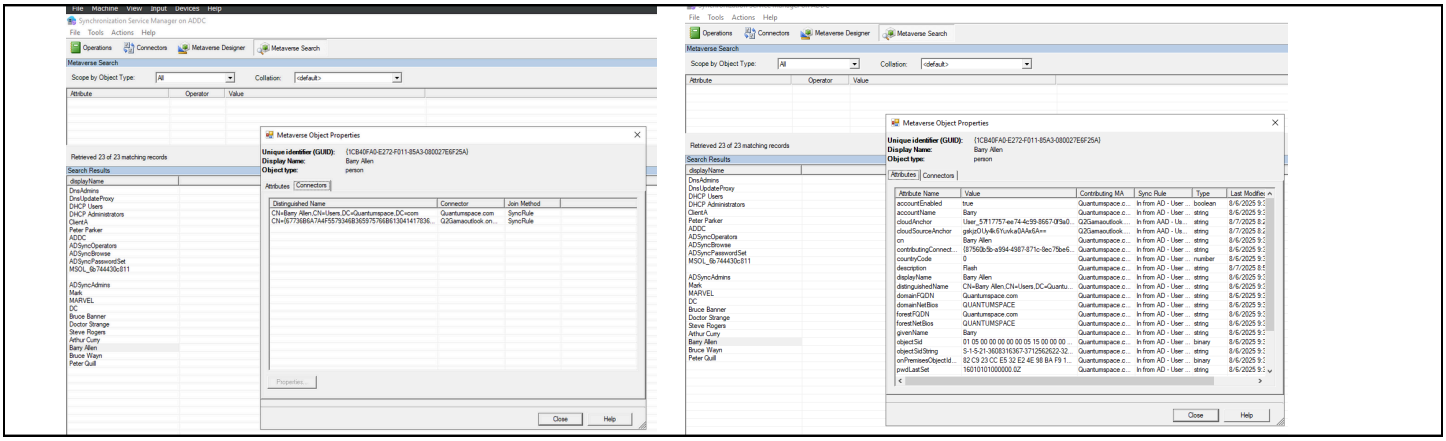


Cloud Filtered will be set to “True”, based on value of specific Attribute

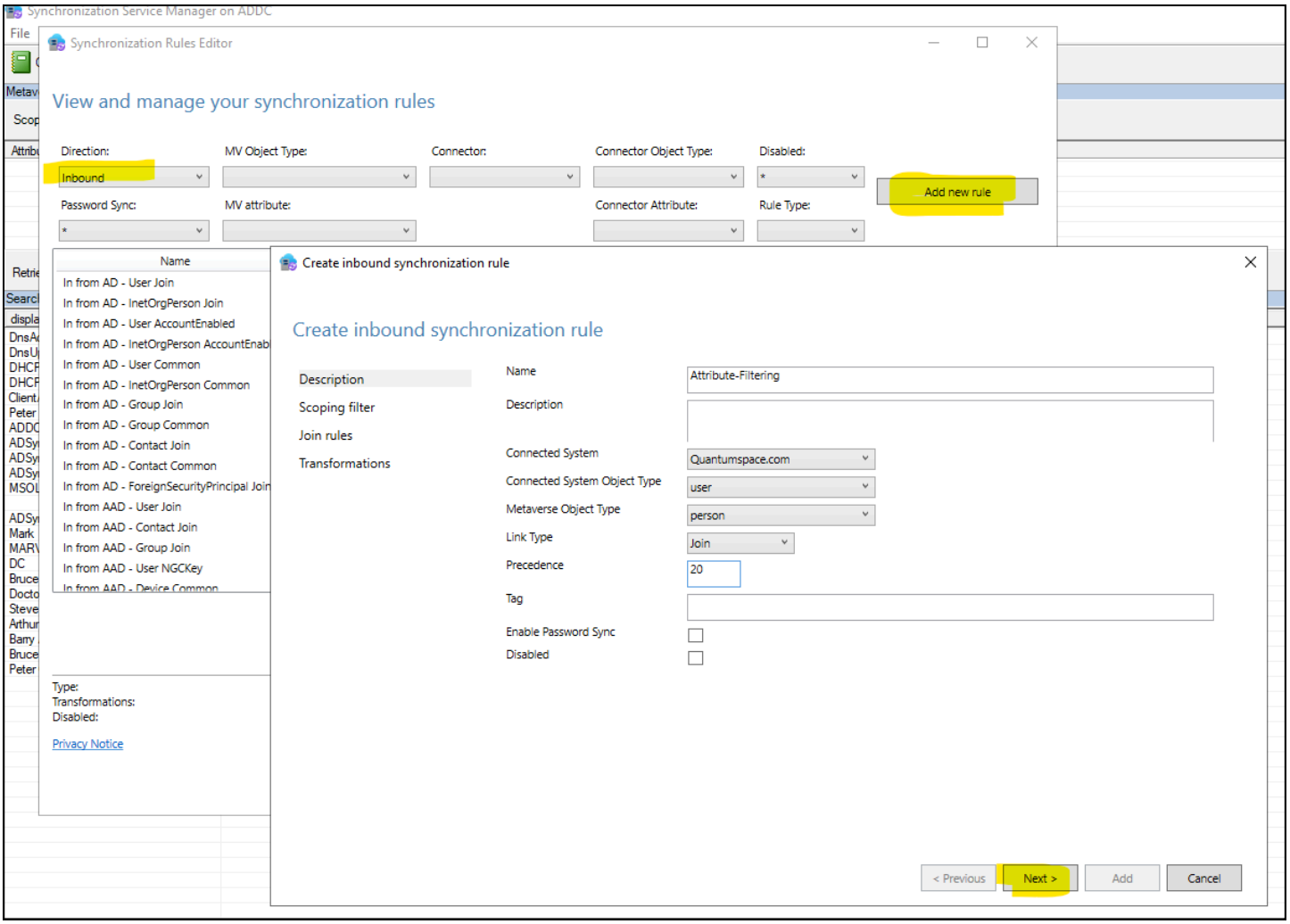
- For this example, targeting user object: Barry Allen with attribute description as ‘Flash’. Now the cloud filtered will be set to ‘true’ for this object based on this attribute.

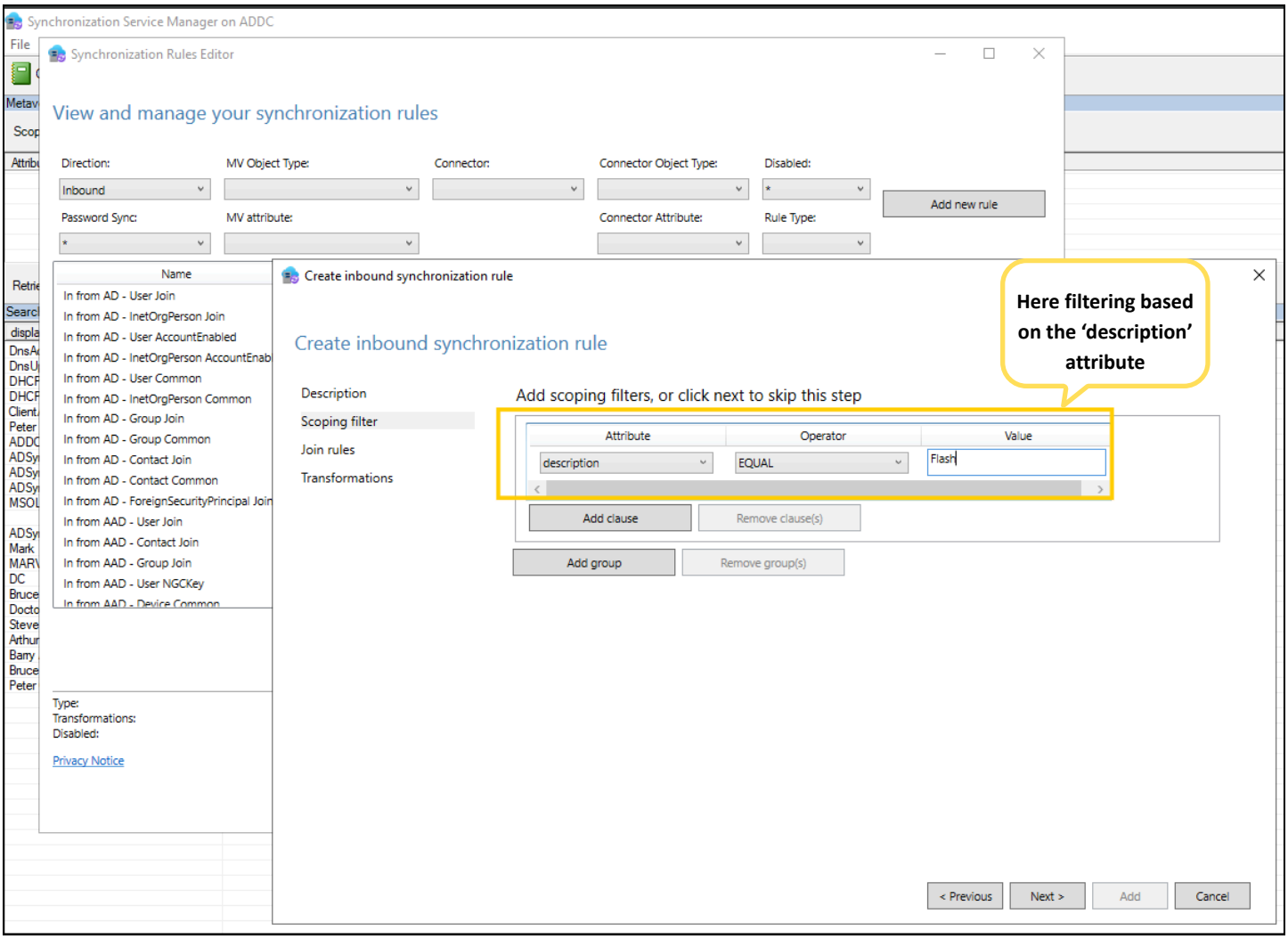


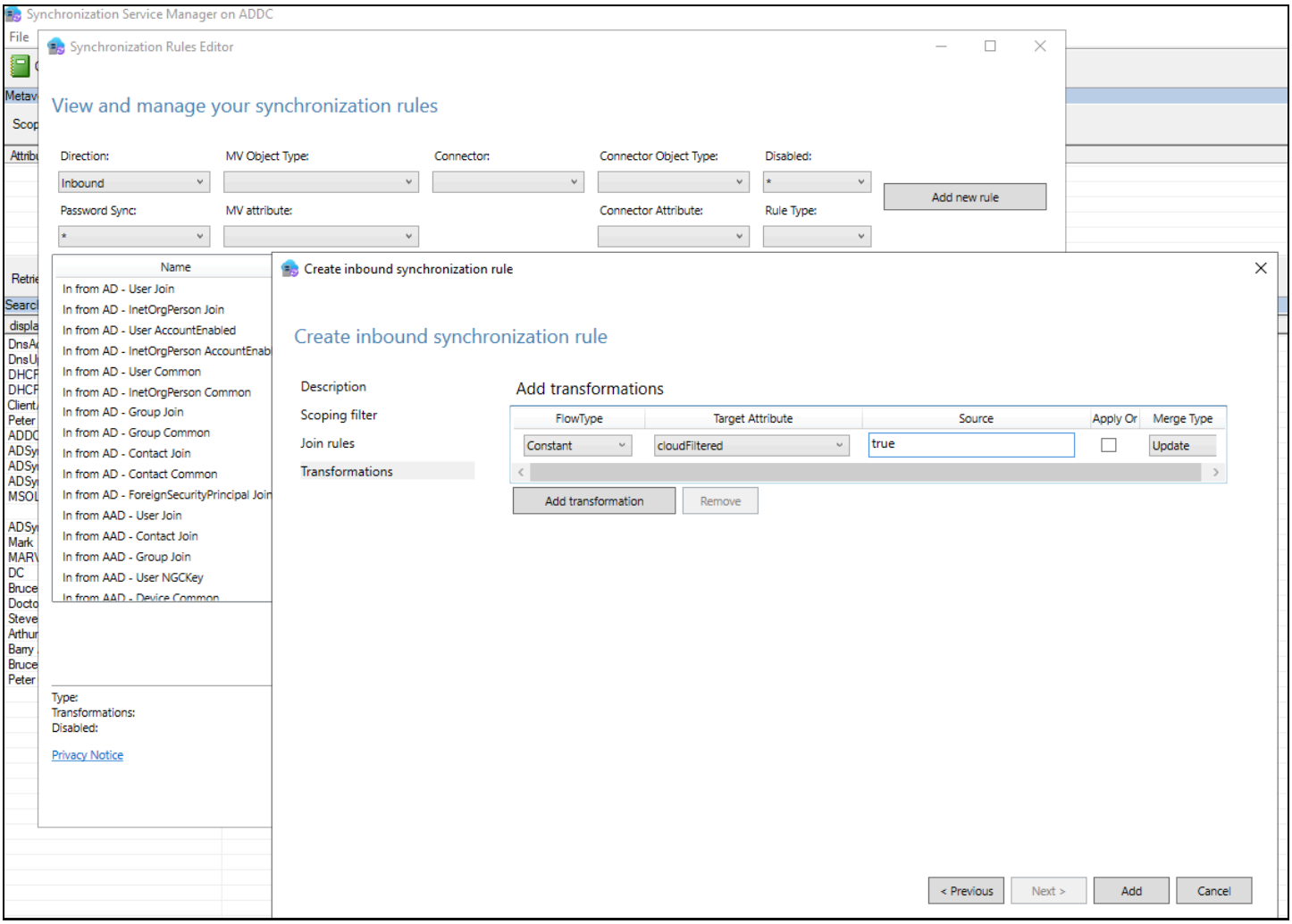
- The object is currently synced to Entra ID and has no cloud filtered attribute.

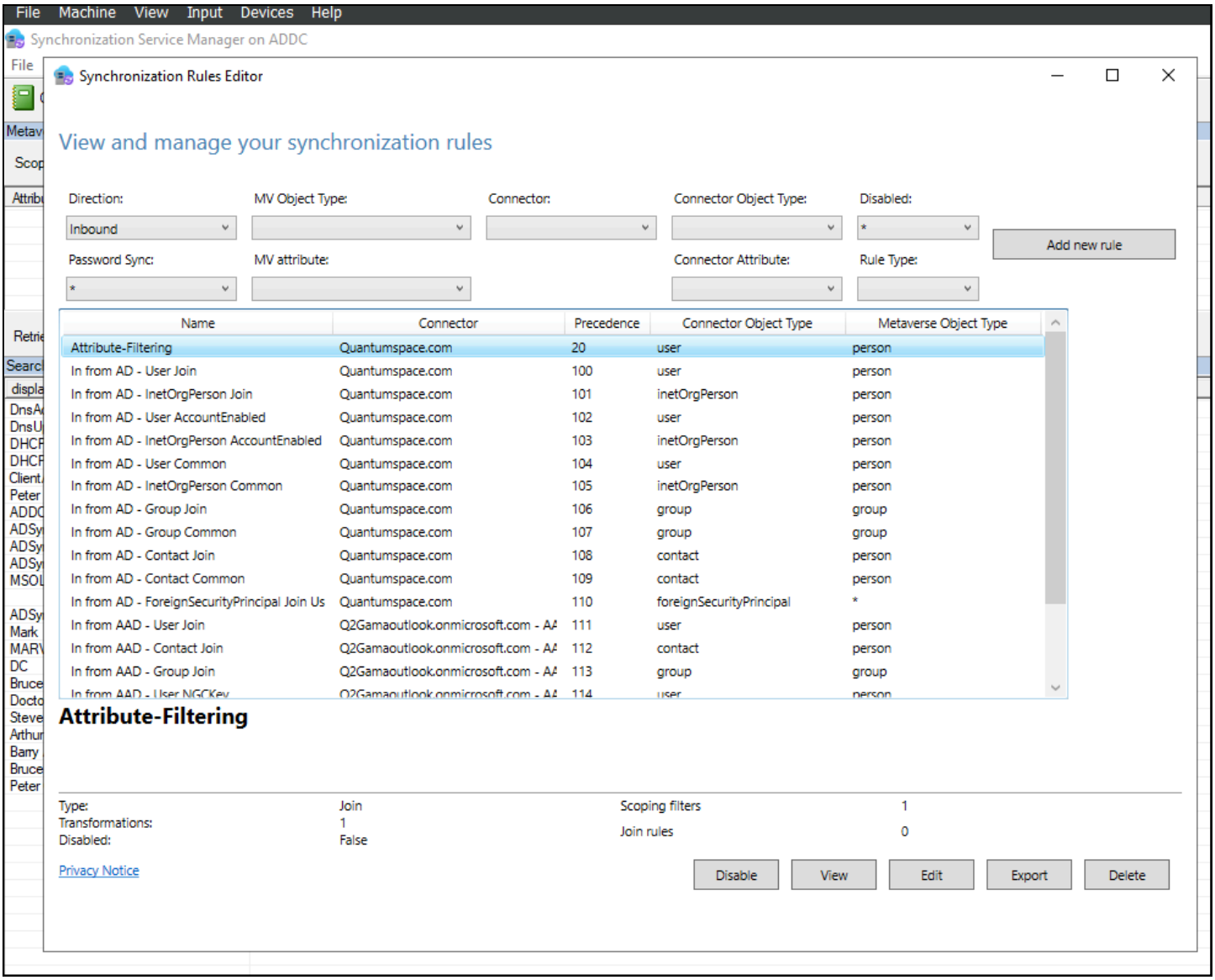


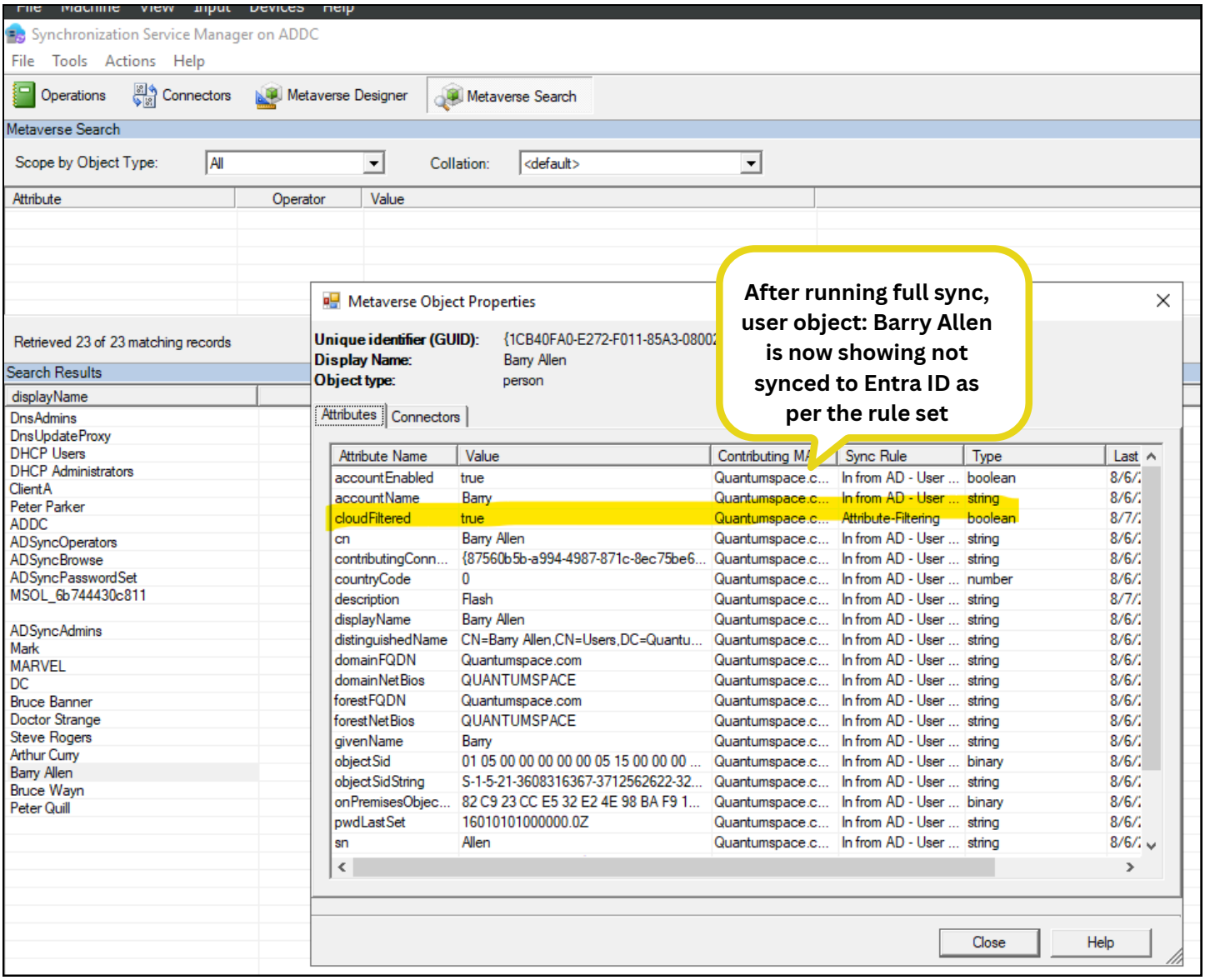
- On the Sync rule editor, Add new rule and name Attribute-Filtering

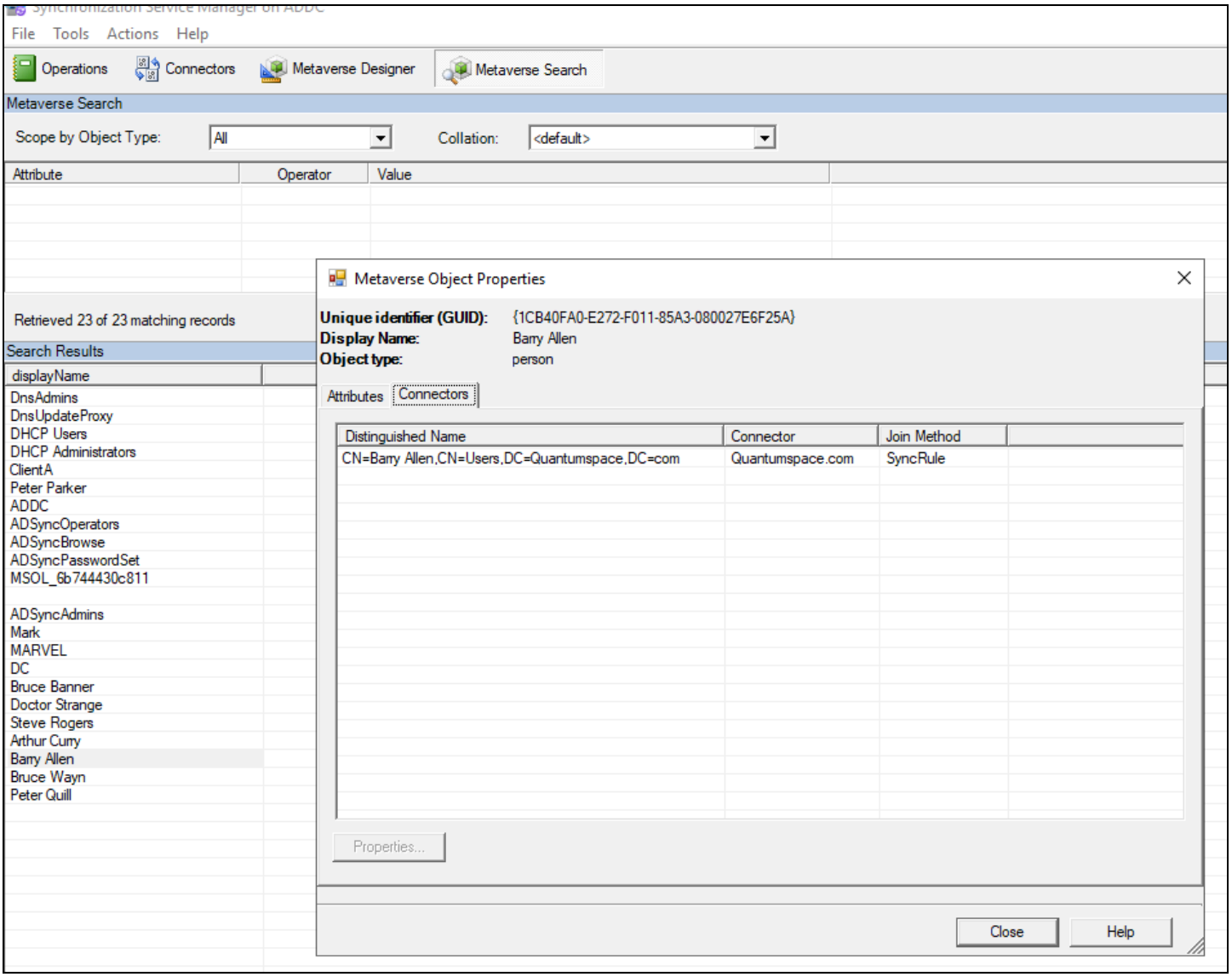

Synchronization Service Manager on ADDC
File
Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Add new rule
Password Sync:
*
MV attribute:
Connector Attribute:
Rule Type:
Name
In from AD - User Join
In from AD - InetOrgPerson Join
In from AD - User AccountEnabled
In from AD - InetOrgPerson AccountEnab
In from AD - User Common
In from AD - InetOrgPerson Common
In from AD - Group Join
In from AD - Group Common
In from AD - Contact Join
In from AD - Contact Common
In from AD - ForeignSecurityPrincipal Join
In from AAD - User Join
In from AAD - Contact Join
In from AAD - Group Join
In from AAD - User NGCKey
In from AAD - Device Common
Type:
Transformations:
Disabled:
Privacy Notice
Create inbound synchronization rule
Create inbound synchronization rule
Description
Scoping filter
Join rules
Transformations
Name
Attribute-Filtering
Description
Connected System
Quantumspace.com
Connected System Object Type
user
Metaverse Object Type
person
Link Type
Join
Precedence
20
Tag
Enable Password Sync
Disabled
< Previous
Next >
Add
Cancel


Synchronization Service Manager on ADDC
Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Add new rule
Password Sync:
*
MV attribute:
Connector Attribute:
Rule Type:
Name
In from AD - User Join
In from AD - InetOrgPerson Join
In from AD - User AccountEnabled
In from AD - InetOrgPerson AccountEnabl
In from AD - User Common
In from AD - InetOrgPerson Common
In from AD - Group Join
In from AD - Group Common
In from AD - Contact Join
In from AD - Contact Common
In from AD - ForeignSecurityPrincipal Join
In from AAD - User Join
In from AAD - Contact Join
In from AAD - Group Join
In from AAD - User NGCKey
In from AAD - Device Common
Type:
Transformations:
Disabled:
Privacy Notice
Create inbound synchronization rule
Create inbound synchronization rule
Here filtering based on the 'description' attribute
Description
Scoping filter
Join rules
Transformations
Add scoping filters, or click next to skip this step
Attribute
Operator
Value
description
EQUAL
Flash
Add clause
Remove clause(s)
Add group
Remove group(s)
< Previous
Next >
Add
Cancel


Synchronization Service Manager on ADDC
File
Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Password Sync:
*
MV attribute:
Connector Attribute:
Rule Type:
Add new rule
Name
In from AD - User Join
In from AD - InetOrgPerson Join
In from AD - User AccountEnabled
In from AD - InetOrgPerson AccountEnab
In from AD - User Common
In from AD - InetOrgPerson Common
In from AD - Group Join
In from AD - Group Common
In from AD - Contact Join
In from AD - Contact Common
In from AD - ForeignSecurityPrincipal Join
In from AAD - User Join
In from AAD - Contact Join
In from AAD - Group Join
In from AAD - User NGCKey
In from AAD - Device Common
Type:
Transformations:
Disabled:
Privacy Notice
Create inbound synchronization rule
Create inbound synchronization rule
Description
Scoping filter
Join rules
Transformations
Add transformations
FlowType
Target Attribute
Source
Apply Or
Merge Type
Constant
cloudFiltered
true
Update
Add transformation
Remove
< Previous
Next >
Add
Cancel

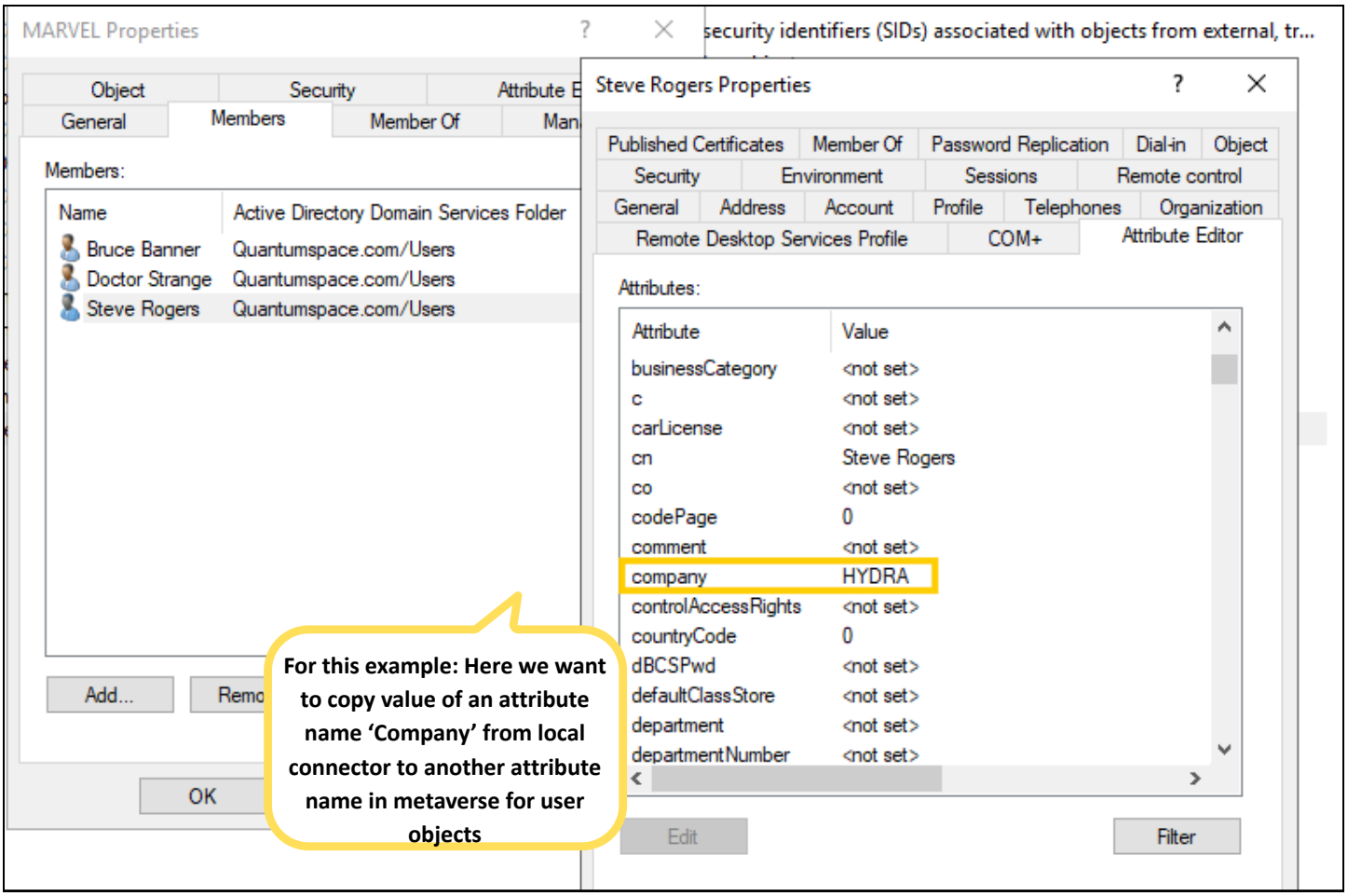

File Machine View Input Devices Help
Synchronization Service Manager on ADDC
Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Add new rule
Password Sync:
*
MV attribute:
Connector Attribute:
Rule Type:
Name
Connector
Precedence
Connector Object Type
Metaverse Object Type
Attribute-Filtering Quantumspace.com 20 user person
In from AD - User Join Quantumspace.com 100 user person
In from AD - InetOrgPerson Join Quantumspace.com 101 inetOrgPerson person
In from AD - User AccountEnabled Quantumspace.com 102 user person
In from AD - InetOrgPerson AccountEnabled Quantumspace.com 103 inetOrgPerson person
In from AD - User Common Quantumspace.com 104 user person
In from AD - InetOrgPerson Common Quantumspace.com 105 inetOrgPerson person
In from AD - Group Join Quantumspace.com 106 group group
In from AD - Group Common Quantumspace.com 107 group group
In from AD - Contact Join Quantumspace.com 108 contact person
In from AD - Contact Common Quantumspace.com 109 contact person
In from AD - ForeignSecurityPrincipal Join Us Quantumspace.com 110 foreignSecurityPrincipal *
In from AAD - User Join Q2Gamaoutlook.onmicrosoft.com - AA 111 user person
In from AAD - Contact Join Q2Gamaoutlook.onmicrosoft.com - AA 112 contact person
In from AAD - Group Join Q2Gamaoutlook.onmicrosoft.com - AA 113 group group
Attribute-Filtering
Type: Join
Transformations: 1
Disabled: False
Scoping filters 1
Join rules 0
Privacy Notice
Disable
View
Edit
Export
Delete


Synchronization Service Manager on ADDC
File Tools Actions Help
Operations
Connectors
Metaverse Designer
Metaverse Search
Metaverse Search
Scope by Object Type: All
Collation: <default>
Attribute
Operator
Value
Retrieved 23 of 23 matching records
Search Results
displayName
DnsAdmins
DnsUpdateProxy
DHCP Users
DHCP Administrators
ClientA
Peter Parker
ADDC
ADSyncOperators
ADSyncBrowse
ADSyncPasswordSet
MSOL_6b744430c811
ADSyncAdmins
Mark
MARVEL
DC
Bruce Banner
Doctor Strange
Steve Rogers
Arthur Curry
Barry Allen
Bruce Wayn
Peter Quill
Metaverse Object Properties
Unique identifier (GUID): {1CB40FA0-E272-F011-85A3-0800
Display Name: Barry Allen
Object type: person
Attributes
Connectors
Attribute Name
Value
Contributing MA
Sync Rule
Type
Last
accountEnabled true Quantumspace.c... In from AD - User ... boolean 8/6/
accountName Barry Quantumspace.c... In from AD - User ... string 8/6/
cloudFiltered true Quantumspace.c... Attribute-Filtering boolean 8/7/
cn Barry Allen Quantumspace.c... In from AD - User ... string 8/6/
contributingConn... {87560b5b-a994-4987-871c-8ec75be6... Quantumspace.c... In from AD - User ... string 8/6/
countryCode 0 Quantumspace.c... In from AD - User ... number 8/6/
description Flash Quantumspace.c... In from AD - User ... string 8/7/
displayName Barry Allen Quantumspace.c... In from AD - User ... string 8/6/
distinguishedName CN=Barry Allen,CN=Users,DC=Quantu... Quantumspace.c... In from AD - User ... string 8/6/
domainFQDN Quantumspace.com Quantumspace.c... In from AD - User ... string 8/6/
domainNetBios QUANTUMSPACE Quantumspace.c... In from AD - User ... string 8/6/
forestFQDN Quantumspace.com Quantumspace.c... In from AD - User ... string 8/6/
forestNetBios QUANTUMSPACE Quantumspace.c... In from AD - User ... string 8/6/
givenName Barry Quantumspace.c... In from AD - User ... string 8/6/
objectSid 01 05 00 00 00 00 00 05 15 00 00 00 ... Quantumspace.c... In from AD - User ... binary 8/6/
objectSidString S-1-5-21-3608316367-3712562622-32... Quantumspace.c... In from AD - User ... string 8/6/
onPremisesObjec... 82 C9 23 CC E5 32 E2 4E 98 BA F9 1... Quantumspace.c... In from AD - User ... binary 8/6/
pwdLastSet 16010101000000.0Z Quantumspace.c... In from AD - User ... string 8/6/
sn Allen Quantumspace.c... In from AD - User ... string 8/6/
Close
Help
After running full sync, user object: Barry Allen is now showing not synced to Entra ID as per the rule set

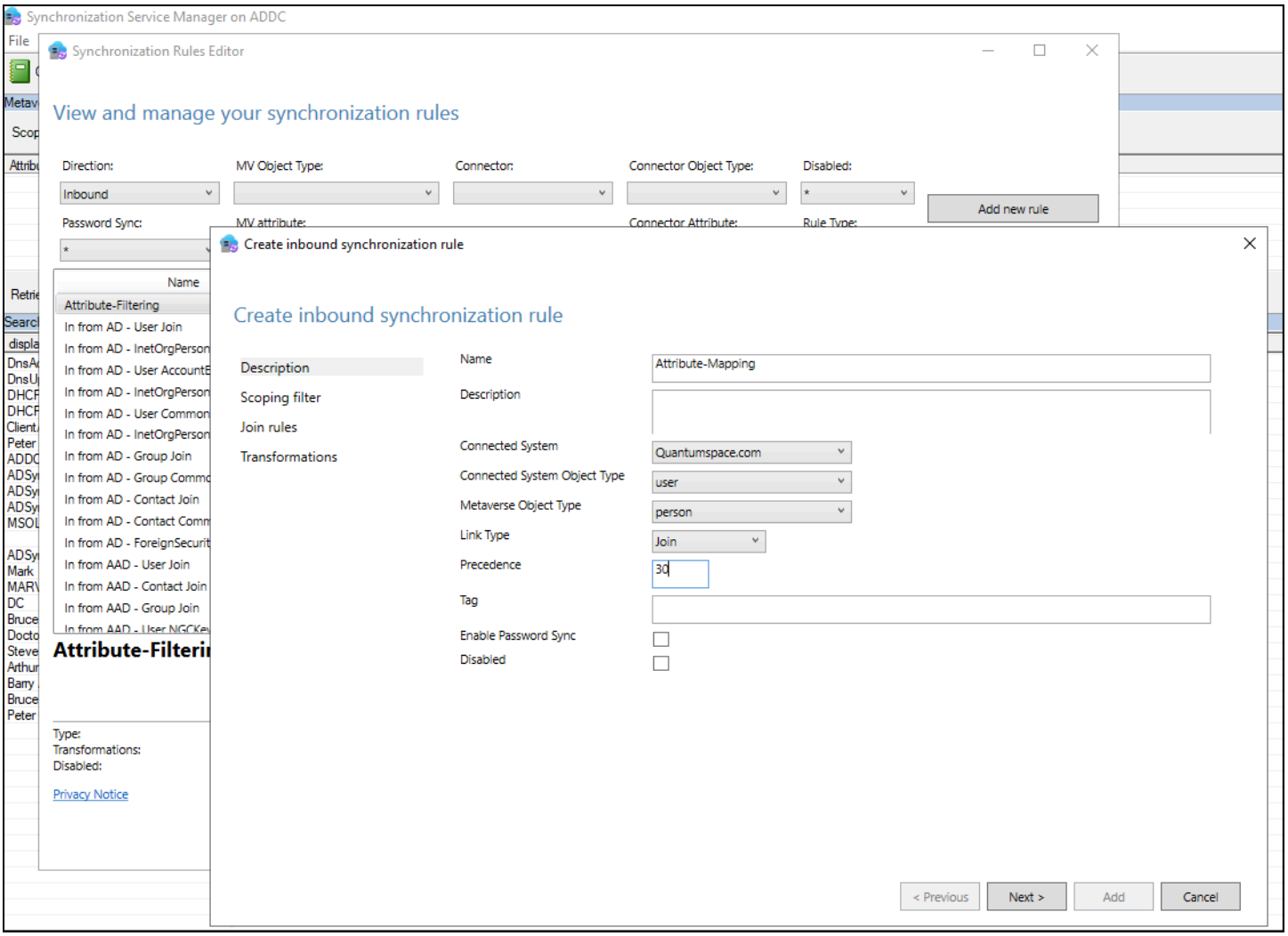


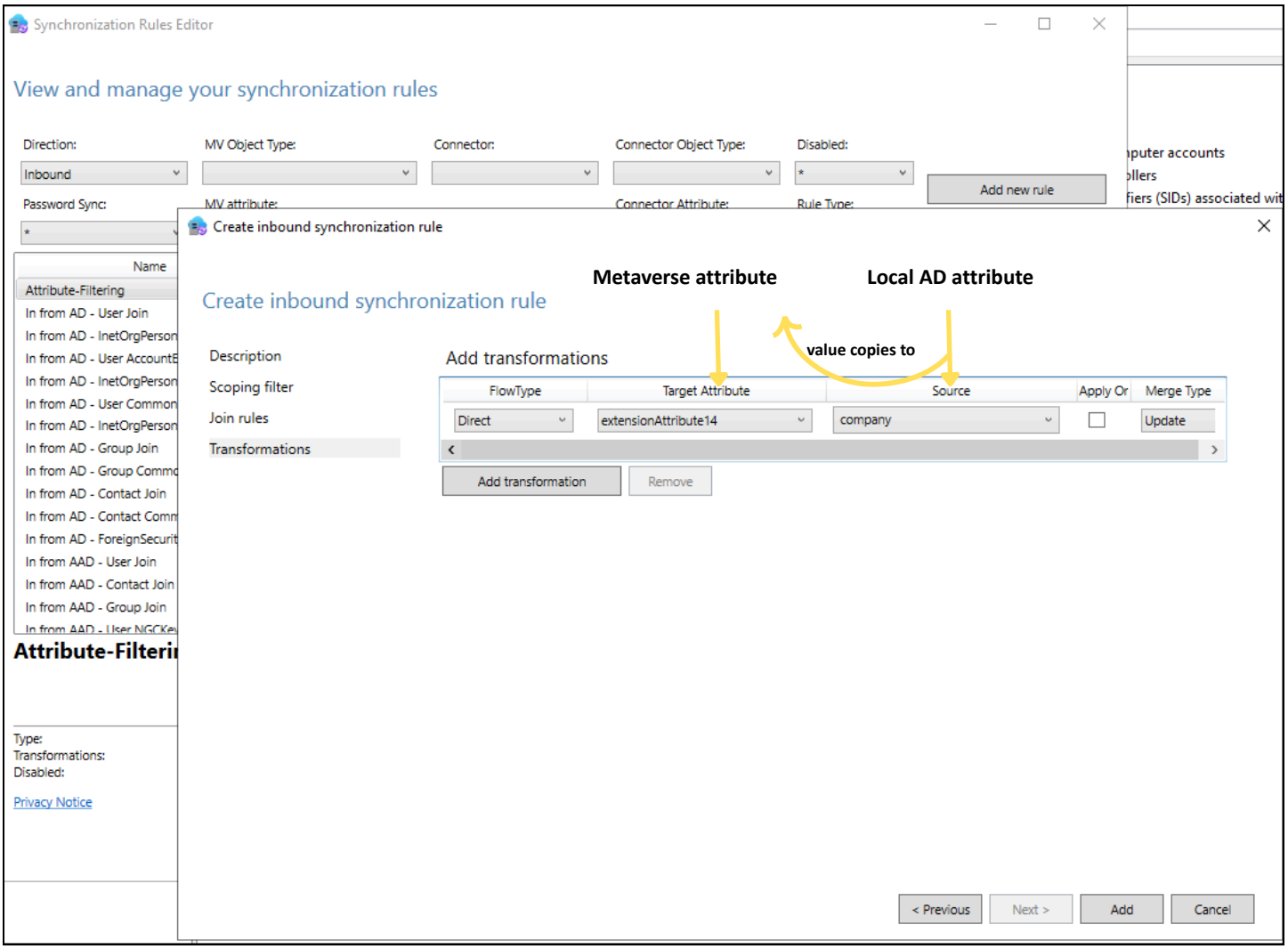
Create Attribute mapping rule

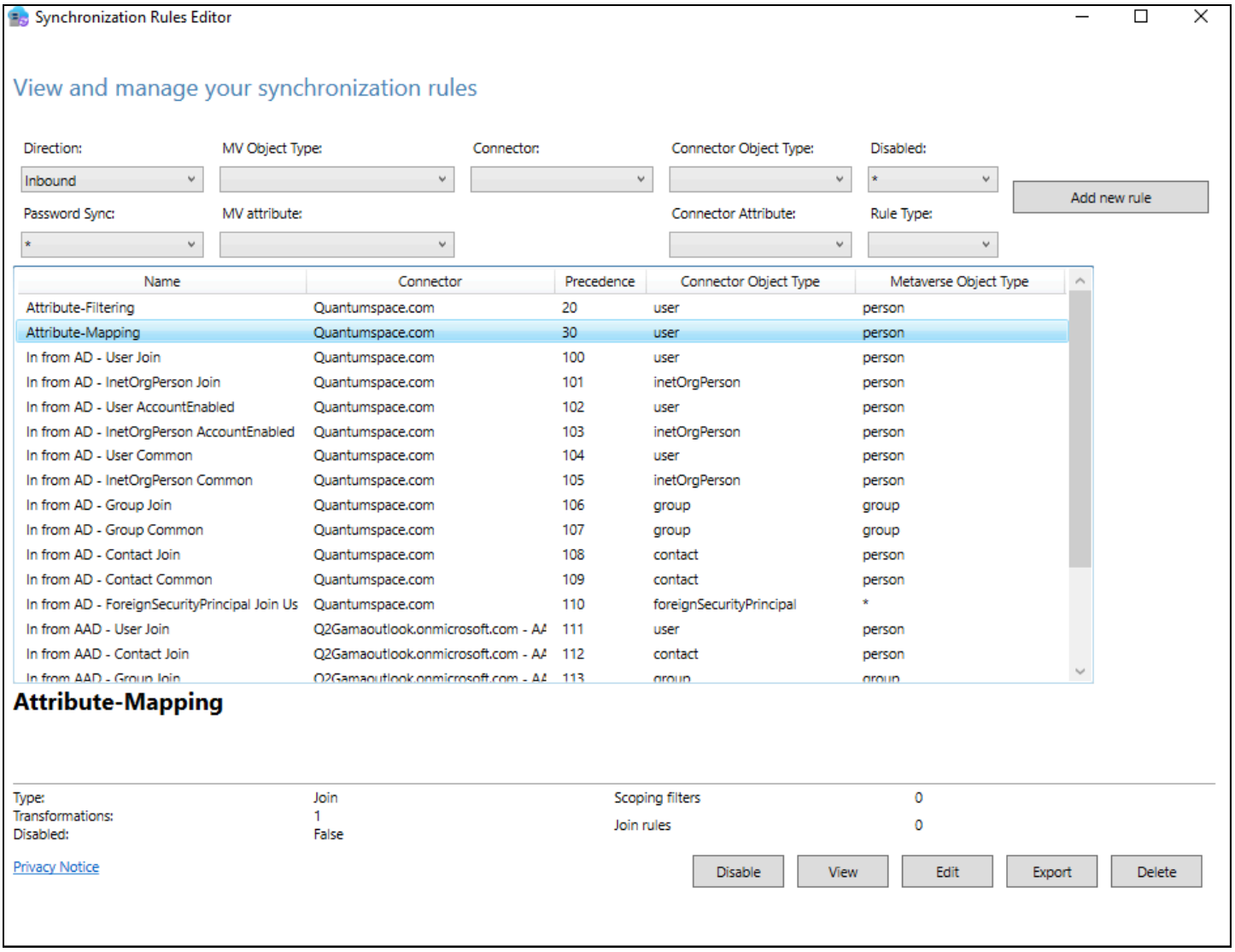
- For creating this rule, aim is to copy value of a particular attribute to another attribute in metaverse

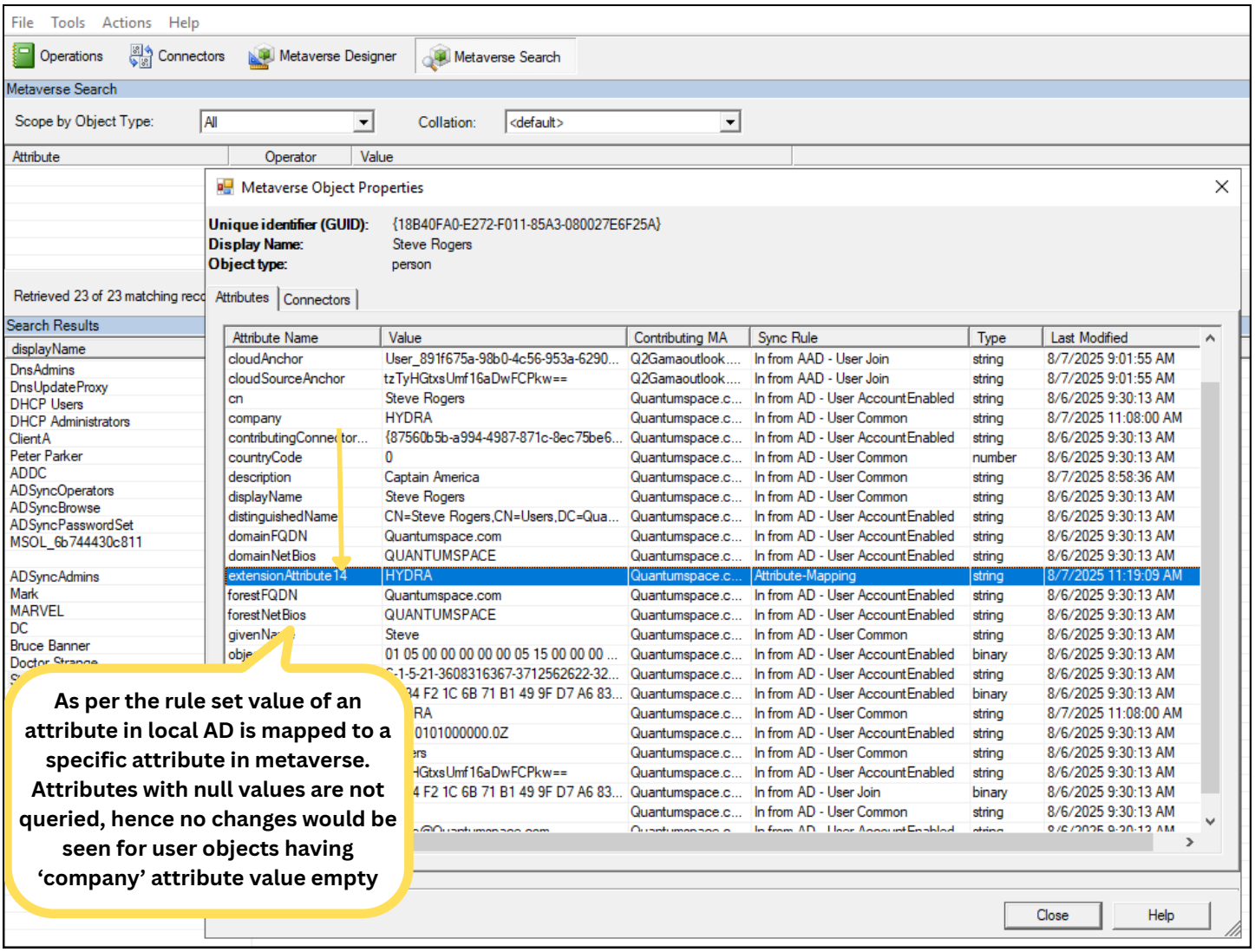


- Create new rule in sync rule editor naming: Attribute mapping and skip the join and scope section. At the Transformation section, select the local AD connector attribute to be copied to particular metaverse attribute. Add the rule and run full sync.


Synchronization Service Manager on ADDC
File
Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Add new rule
Password Sync:
*
Name
Attribute-Filtering
In from AD - User Join
In from AD - InetOrgPerson
In from AD - User AccountE
In from AD - InetOrgPerson
In from AD - User Common
In from AD - InetOrgPerson
In from AD - Group Join
In from AD - Group Commo
In from AD - Contact Join
In from AD - Contact Comn
In from AD - ForeignSecurit
In from AAD - User Join
In from AAD - Contact Join
In from AAD - Group Join
Attribute-Filteri
Type:
Transformations:
Disabled:
Privacy Notice
Create inbound synchronization rule
Create inbound synchronization rule
Description
Scoping filter
Join rules
Transformations
Name
Attribute-Mapping
Description
Connected System
Quantumspace.com
Connected System Object Type
user
Metaverse Object Type
person
Link Type
Join
Precedence
30
Tag
Enable Password Sync
Disabled
< Previous
Next >
Add
Cancel


Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Add new rule
Password Sync:
*
Name
Attribute-Filtering
In from AD - User Join
In from AD - InetOrgPerson
In from AD - User AccountE
In from AD - InetOrgPerson
In from AD - User Common
In from AD - InetOrgPerson
In from AD - Group Join
In from AD - Group Commo
In from AD - Contact Join
In from AD - Contact Comm
In from AD - ForeignSecurit
In from AD - User Join
In from AAD - Contact Join
In from AAD - Group Join
Attribute-Filteri
Type:
Transformations:
Disabled:
Privacy Notice
Create inbound synchronization rule
Create inbound synchronization rule
Description
Scoping filter
Join rules
Transformations
Metaverse attribute
Local AD attribute
value copies to
Add transformations
FlowType
Target Attribute
Source
Apply Or
Merge Type
Direct
extensionAttribute14
company
Update
Add transformation
Remove
< Previous
Next >
Add
Cancel


Synchronization Rules Editor
View and manage your synchronization rules
Direction:
Inbound
MV Object Type:
Connector:
Connector Object Type:
Disabled:
*
Add new rule
Password Sync:
*
MV attribute:
Connector Attribute:
Rule Type:
Name
Connector
Precedence
Connector Object Type
Metaverse Object Type
Attribute-Filtering Quantumspace.com 20 user person
Attribute-Mapping Quantumspace.com 30 user person
In from AD - User Join Quantumspace.com 100 user person
In from AD - InetOrgPerson Join Quantumspace.com 101 inetOrgPerson person
In from AD - User AccountEnabled Quantumspace.com 102 user person
In from AD - InetOrgPerson AccountEnabled Quantumspace.com 103 inetOrgPerson person
In from AD - User Common Quantumspace.com 104 user person
In from AD - InetOrgPerson Common Quantumspace.com 105 inetOrgPerson person
In from AD - Group Join Quantumspace.com 106 group group
In from AD - Group Common Quantumspace.com 107 group group
In from AD - Contact Join Quantumspace.com 108 contact person
In from AD - Contact Common Quantumspace.com 109 contact person
In from AD - ForeignSecurityPrincipal Join Us Quantumspace.com 110 foreignSecurityPrincipal *
In from AAD - User Join Q2Gamaoutlook.onmicrosoft.com - AA 111 user person
In from AAD - Contact Join Q2Gamaoutlook.onmicrosoft.com - AA 112 contact person
Attribute-Mapping
Type: Join
Transformations: 1
Disabled: False
Scoping filters 0
Join rules 0
Privacy Notice
Disable
View
Edit
Export
Delete


File Tools Actions Help
Operations
Connectors
Metaverse Designer
Metaverse Search
Metaverse Search
Scope by Object Type:
All
Collation:
<default>
Attribute
Operator
Value
Metaverse Object Properties
Unique identifier (GUID): {18B40FA0-E272-F011-85A3-080027E6F25A}
Display Name: Steve Rogers
Object type: person
Attributes
Connectors
Attribute Name
Value
Contributing MA
Sync Rule
Type
Last Modified
cloudAnchor
User_891f675a-98b0-4c56-953a-6290...
Q2Gamaoutlook....
In from AAD - User Join
string
8/7/2025 9:01:55 AM
cloudSourceAnchor
tzTyHGtxsUmf16aDwFCPkw==
Q2Gamaoutlook....
In from AAD - User Join
string
8/7/2025 9:01:55 AM
cn
Steve Rogers
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
company
HYDRA
Quantumspace.c...
In from AD - User Common
string
8/7/2025 11:08:00 AM
contributingConnector...
{87560b5b-a994-4987-871c-8ec75be6...
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
countryCode
0
Quantumspace.c...
In from AD - User Common
number
8/6/2025 9:30:13 AM
description
Captain America
Quantumspace.c...
In from AD - User Common
string
8/7/2025 8:58:36 AM
displayName
Steve Rogers
Quantumspace.c...
In from AD - User Common
string
8/6/2025 9:30:13 AM
distinguishedName
CN=Steve Rogers,CN=Users,DC=Qua...
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
domainFQDN
Quantumspace.com
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
domainNetBios
QUANTUMSPACE
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
extensionAttribute14
HYDRA
Quantumspace.c...
Attribute-Mapping
string
8/7/2025 11:19:09 AM
forestFQDN
Quantumspace.com
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
forestNetBios
QUANTUMSPACE
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
Steve
Quantumspace.c...
In from AD - User Common
string
8/6/2025 9:30:13 AM
01 05 00 00 00 00 00 05 15 00 00 00 ...
Quantumspace.c...
In from AD - User AccountEnabled
binary
8/6/2025 9:30:13 AM
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
Quantumspace.c...
In from AD - User AccountEnabled
binary
8/6/2025 9:30:13 AM
Quantumspace.c...
In from AD - User Common
string
8/7/2025 11:08:00 AM
0101000000.0Z
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
Quantumspace.c...
In from AD - User Common
string
8/6/2025 9:30:13 AM
Quantumspace.c...
In from AD - User AccountEnabled
string
8/6/2025 9:30:13 AM
Quantumspace.c...
In from AD - User Join
binary
8/6/2025 9:30:13 AM
Quantumspace.c...
In from AD - User Common
string
8/6/2025 9:30:13 AM
Retrieved 23 of 23 matching reco
Search Results
displayName
DnsAdmins
DnsUpdateProxy
DHCP Users
DHCP Administrators
ClientA
Peter Parker
ADDC
ADSyncOperators
ADSyncBrowse
ADSyncPasswordSet
MSOL_6b744430c811
ADSyncAdmins
Mark
MARVEL
DC
Bruce Banner
Close
Help
As per the rule set value of an attribute in local AD is mapped to a specific attribute in metaverse. Attributes with null values are not queried, hence no changes would be seen for user objects having 'company' attribute value empty