

Microsoft Entra Connect

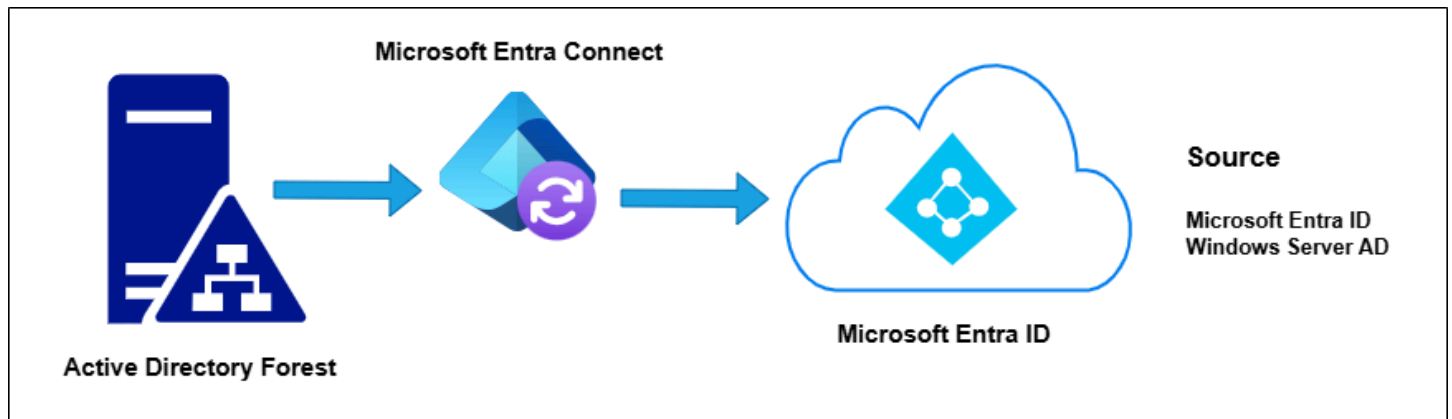
Topics:

- **Entra Connect Architecture Fundamentals**
 - **Sync Process Phases**
 - **Types Of Filtering**
 - **Synchronization Rule Editor**
 - **Sync Rule hierarchy**
 - **Connector Configuration & Attribute Flow Mapping**
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Entra Connect Architecture Fundamentals

Microsoft AAD Connect (Now Microsoft Entra Connect) is a hybrid identity bridge tool that synchronizes your on-premises Active Directory (AD) with Microsoft Entra ID (formerly Azure AD).

It enables a single identity for users across on-premises and cloud environments, allowing them to use the same credentials to access resources like Microsoft 365, Azure, and other cloud apps

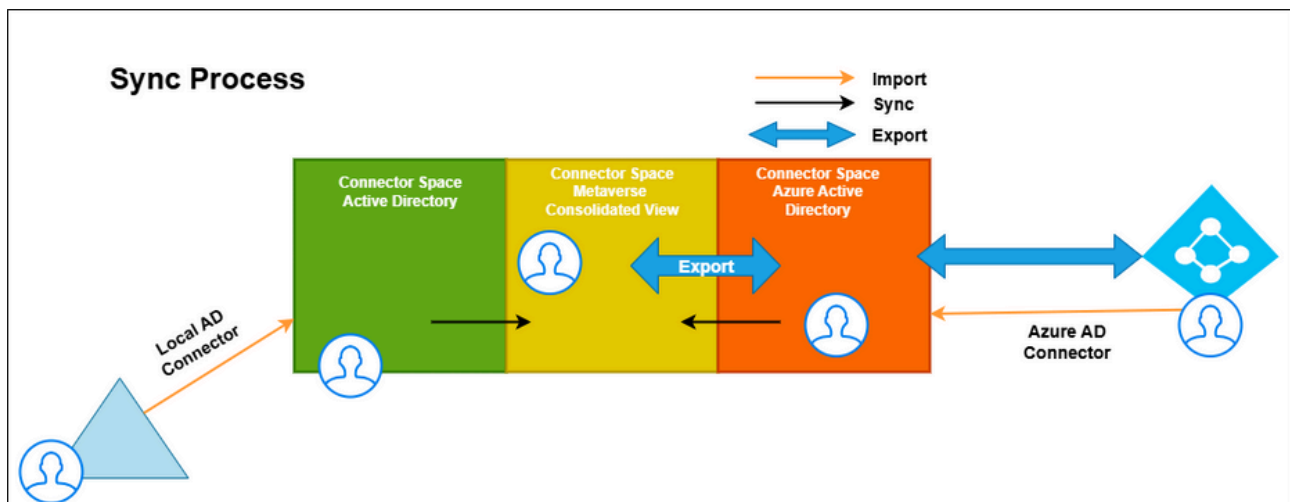


- The Users, groups & Devices on On-prem can be synced to Entra ID by using AAD Connect tool. The tool has its own inbuilt logic and database on behalf of which, one consolidated data image is maintained all across the connected data sources.
- The connected data source here means either the local AD connector source or Entra ID connector source.
- There is a periodic communication that always happens between these connector sources and AAD Connect. The APIs that are responsible for this are called Connectors.
- With the help of Local AD connector, AAD Connect pulls information from On-prem AD and with the help of Entra ID connector, the same information is exported to Entra ID.
- Connectors are basically a medium on behalf of which AAD Connect, as an application tool communicates with the connector sources.
- The database of AAD Connect has three logical sub-divisions, which are called as connector space of Local Active Directory, Connector space of Azure Active Directory and Connector space of Metaverse; where you can see the consolidated view of an object that has to be synced to the cloud.
- There are two types of processes to sync an object: Delta Sync process and Full Sync process. In Delta sync process, only the attributes that are updated, deleted or removed i.e. only the changes that are done to the objects are queried. In Full sync process, the entire objects and the respective attributes are being queried.

Sync Process Phases:

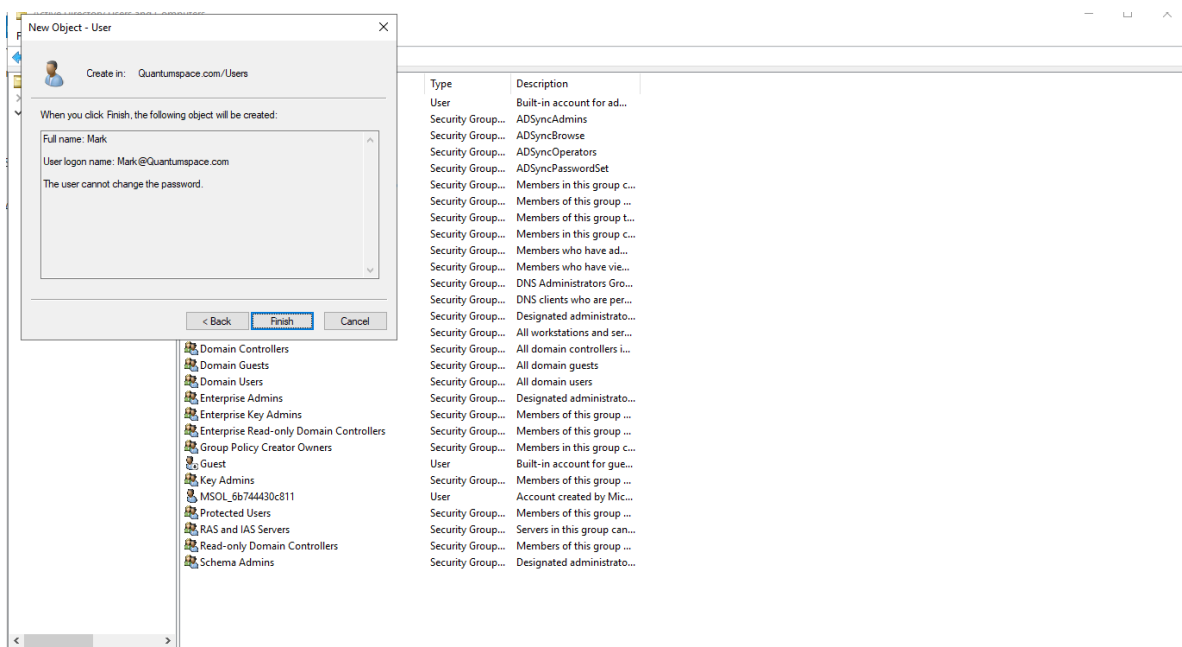
- Both Delta and Full sync process has three phases; Import, Sync and Export.
- The very first process which will be initiated will be the import on the local AD connector, so that the information from DC can be saved to the connector space of the local AD.

- Similarly, next process will be an import from Entra ID to the AAD connector space.
- Once the import is complete from On-prem as well as from Entra ID, a sync process will happen between the local AD connector space and Metaverse space. This will create an image or replica of the object in metaverse with a flag 'Add', this means there is a new user object created which needs to be exported to the cloud.
- The next process will be a sync from AAD connector space to metaverse; incase any new change in the objects of Entra ID reported, will be synced in the metaverse.
- The last process is the export which will be done on the AAD connector space. This will create an image of the object(to be synced to cloud) in connector space of AAD and will export it to Entra ID.
- When this whole process is completed, an acknowledgement flag of waiting export confirmation can be seen. This means that though information is being replicated AAD connector space to Entra ID, but the particular information is not yet acknowledged that it has been imported to Entra ID.
- In order to verify if the object is being successfully imported to Entra ID, an import can be run on the AAD connector that will remove the awaiting export confirmation flag from the particular object.



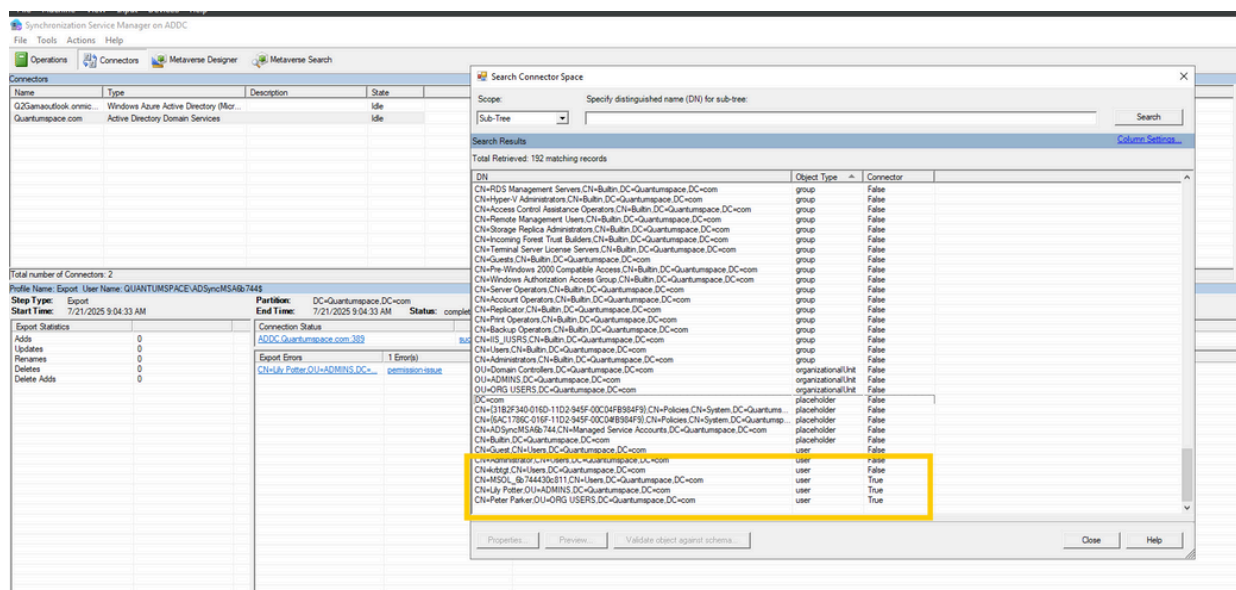
Example:

- Create a new object in local AD, go to AD users & Computers and create a new user: Mark. All the OUs in this demonstration are synced with Entra ID, there has been no filtering done here.

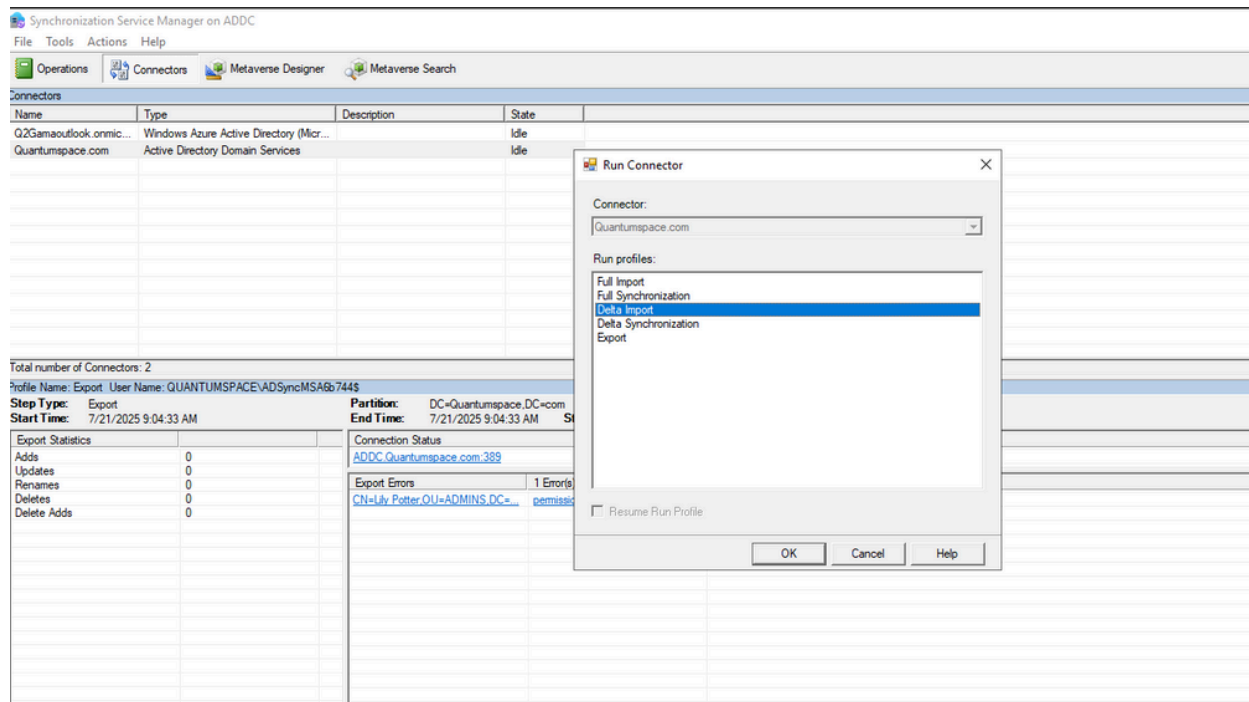


- Go to the Synchronization service manager > Connectors> right click on local domain connector> search connector space> Object type

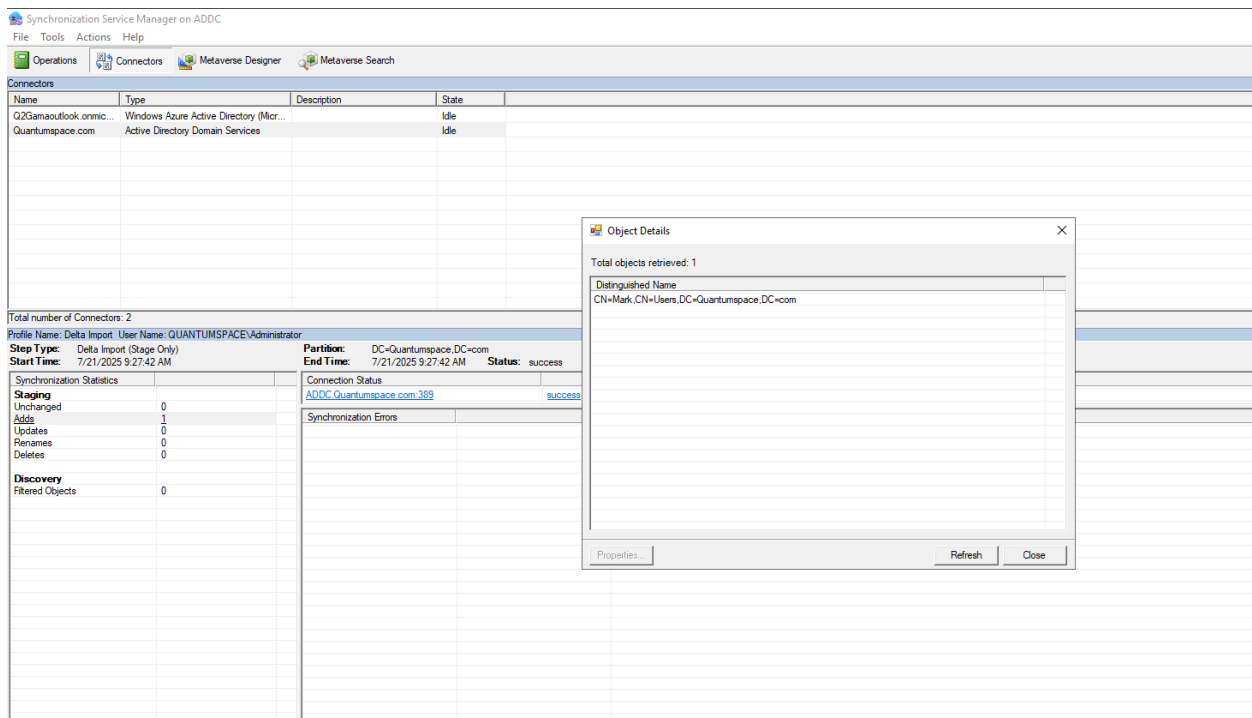
Here in the local AD connector space new user: Mark will not be visible yet.



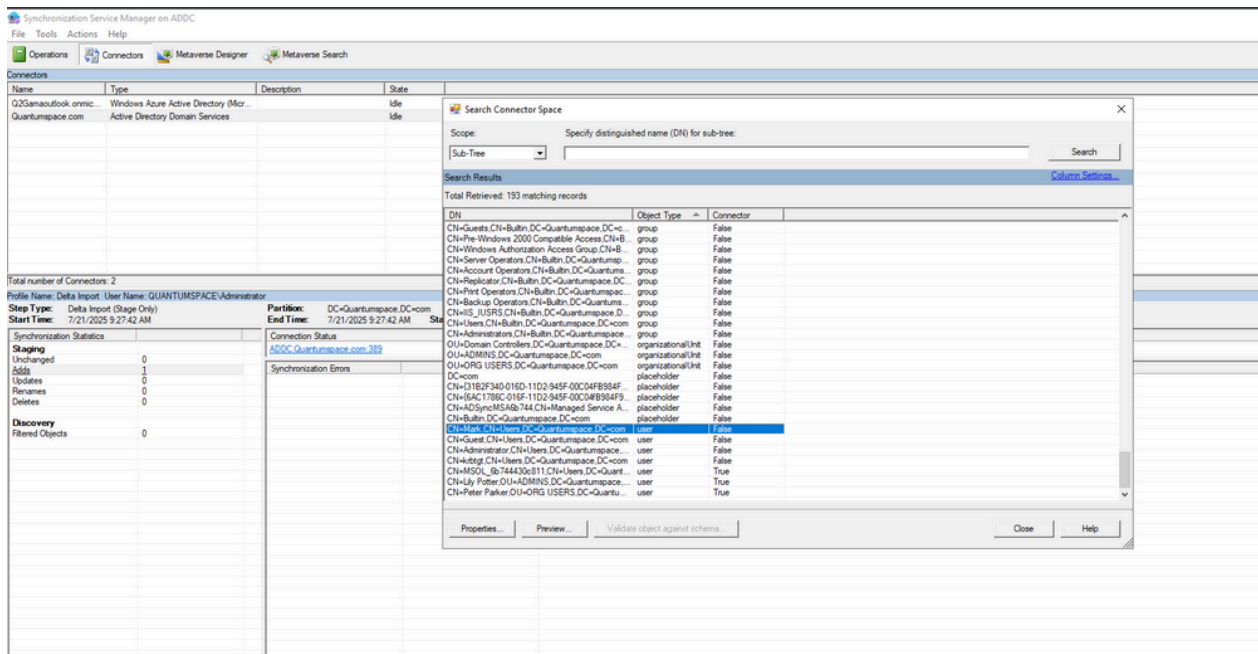
- Right click on local domain connector> Run> Delta Import. This will create a replica of the new object in local domain connector space.



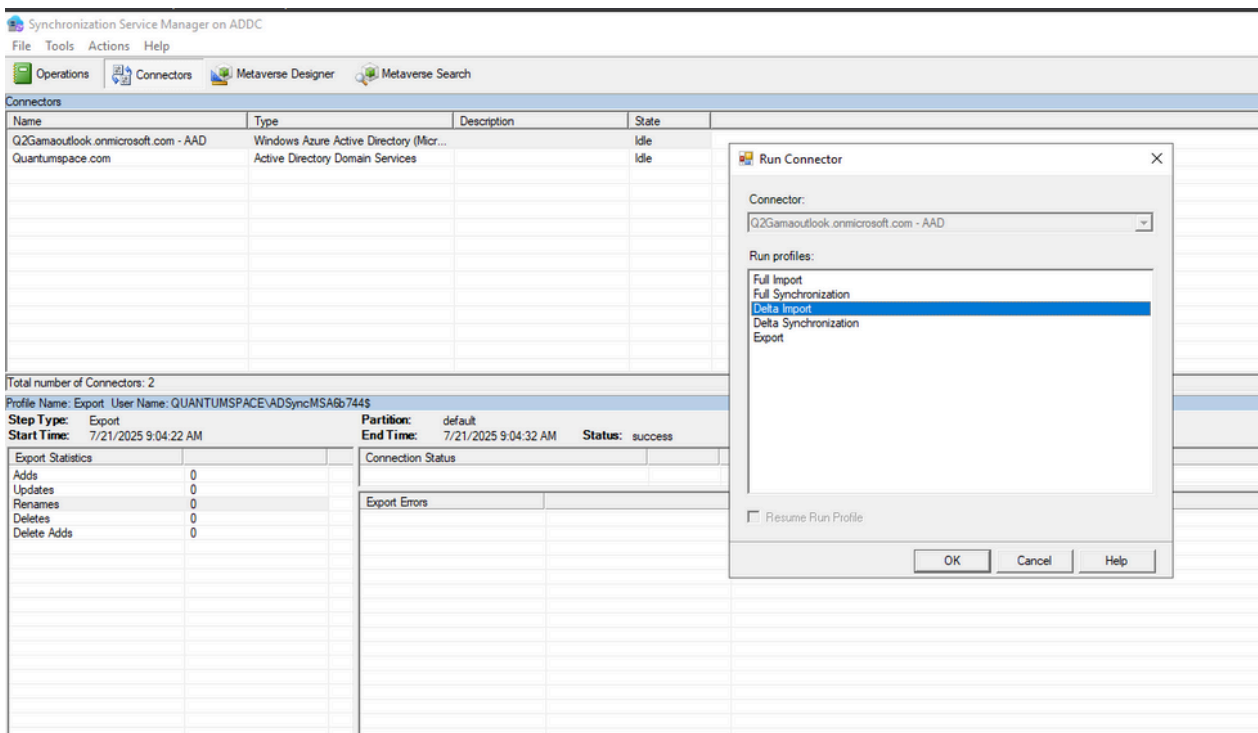
- An 'Adds' update will be visible after the import operation.



- The new user now will be visible in local AD connector space.



- To check for any object sync from Azure AD, run delta import on the AAD connector. Incase there is any object, it will be visible in the 'Adds'.



- Now run a delta sync on local AD connector to replicate the user: Mark into Metaverse connector space.

The screenshot displays the Synchronization Service Manager (SSM) application window. The main window has a menu bar (File, Tools, Actions, Help) and a toolbar with icons for Operations, Connectors, Metaverse Designer, and Metaverse Search. The 'Connectors' tab is active, showing a table of configured connectors.

Name	Type	Description	State
Q2Gamaoutlook.onmicrosoft.com - AAD	Windows Azure Active Directory (Mcr...		Idle
Quantumspace.com	Active Directory Domain Services		Idle

Below the table, it states 'Total number of Connectors: 2'. The 'Profile Name' is 'Delta Import' and the 'User Name' is 'QUANTUMSPACE\Administrator'. The 'Step Type' is 'Delta Import (Stage Only)'. The 'Start Time' is '7/21/2025 9:27:42 AM'. The 'Partition' is 'DC=Quantumspace,DC=com'. The 'End Time' is '7/21/2025 9:27:42 AM'. The 'Status' is 'success'.

The 'Synchronization Statistics' section shows the following counts:

Category	Count
Staging	
Unchanged	0
Adds	1
Updates	0
Renames	0
Deletes	0
Discovery	
Filtered Objects	0

The 'Connection Status' section shows 'ADDC.Quantumspace.com:389' with a status of 'SUCCESS'. The 'Synchronization Errors' section is empty.

The 'Run Connector' dialog box is open, showing the 'Connector' dropdown set to 'Quantumspace.com'. The 'Run profiles' list includes 'Full Import', 'Full Synchronization', 'Delta Import', 'Delta Synchronization' (selected), and 'Export'. The 'Resume Run Profile' checkbox is unchecked. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.

- Similarly, run delta sync on AAD connector space; this will bring changes from AAD connector space to metaverse space.
- For the final process, run an export on AAD connector to send the new change(user: Mark) to Entra ID. Once the export operation is complete, check search the connector space to see user object: Mark. If its showing then it means it has been successfully synced to Entra ID.

Synchronization Service Manager on ADDC

File Tools Actions Help

Operations Connectors Metaverse Designer Metaverse Search

Connectors

Name	Type	Description	State
Q2Gamaoutlook.onmicrosoft.com - AAD	Windows Azure Active Directory (Mcr...		Idle
Quantumspace.com	Active Directory Domain Services		Idle

Total number of Connectors: 2

Profile Name: Delta Synchronization User Name: QUANTUMSPACE\Administrator

Step Type: Delta Synchronization Partition: default

Start Time: 7/21/2025 10:34:49 AM End Time: 7/21/2025 10:34:49 AM

Synchronization Statistics

Inbound Synchronization	Connection Status
Projections	
Joins	
Filtered Disconnectors	
Disconnectors	
Connectors with Row Updates	
Connectors without Row Updates	
Filtered Connectors	
Deleted Connectors	
Metaverse Object Deletes	

Flow Errors

Run Connector

Connector: Q2Gamaoutlook.onmicrosoft.com - AAD

Run profiles:

- Full Import
- Full Synchronization
- Delta Import
- Delta Synchronization
- Export

☐ Resume Run Profile

OK Cancel Help

Synchronization Service Manager on ADDC

File Tools Actions Help

Operations Connectors Metaverse Designer Metaverse Search

Connectors

Name	Type	Description	State
Q2Gamaoutlook.onmicrosoft.com - AAD	Windows Azure Active Directory (Mcr...		Idle
Quantumspace.com	Active Directory Domain Services		Idle

Total number of Connectors: 2

Profile Name: Export Statistics User Name: QUANTUMSPACE\Administrator

Step Type: Export Statistics Partition: default

Start Time: 7/21/2025 10:34:49 AM End Time: 7/21/2025 10:34:49 AM

Export Statistics

Adds	Updates	Deletes	Deletes Adds

Search Connector Space

Scope: Specify distinguished name (DN) for sub-tree:

Sub-Tree

Search

Search Results

Retrieving 11 of 11 matching records

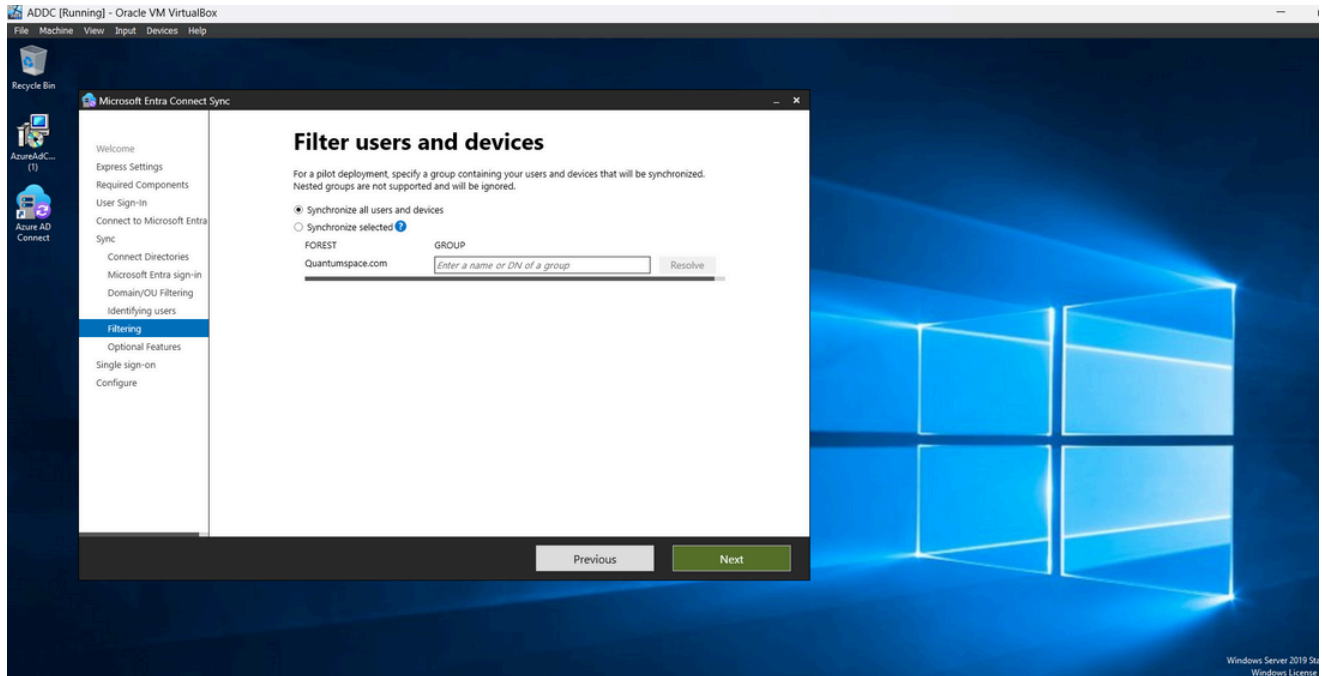
DN	Object Type	Connector	displayName
CN={6D4E4B342F5453354C303630702F62636D75435A56513D3D}	group	True	DnsAdmins
CN={70636C443636716676556D70506A4A6E6F71503076513D3D}	group	True	DnsUpdateProxy
CN={4F335275557045437568794973705733523944646D413D3D}	group	True	DHCP Users
CN={4D6853542F356B6E3055476D415041696A39694332513D3D}	group	True	DHCP Administr...
CN={44644571687879476A45756278336F684470764542773D3D}	group	True	ADSyncOperators
CN={43456A3668576B5A4855477859582F445A4D6E4730413D3D}	group	True	ADSyncBrowse
CN={745434384E374D6E623065464C717255354F676339513D3D}	group	True	ADSyncPasswor...
CN={414F6C75527563302F6B754766307667535A706B6A513D3D}	group	True	ADSyncAdmins
CN={54356D78374F34776D452B574B62386E694E616163513D3D}	user	True	Mark
CN={3176545A484C4B4B3445614A645451697255686432413D3D}	user	True	Lily Potter
CN={674C33516658425832454751756A7162572B682B45413D3D}	user	True	Peter Parker

Properties... Preview... Validate object against schema... Close Help

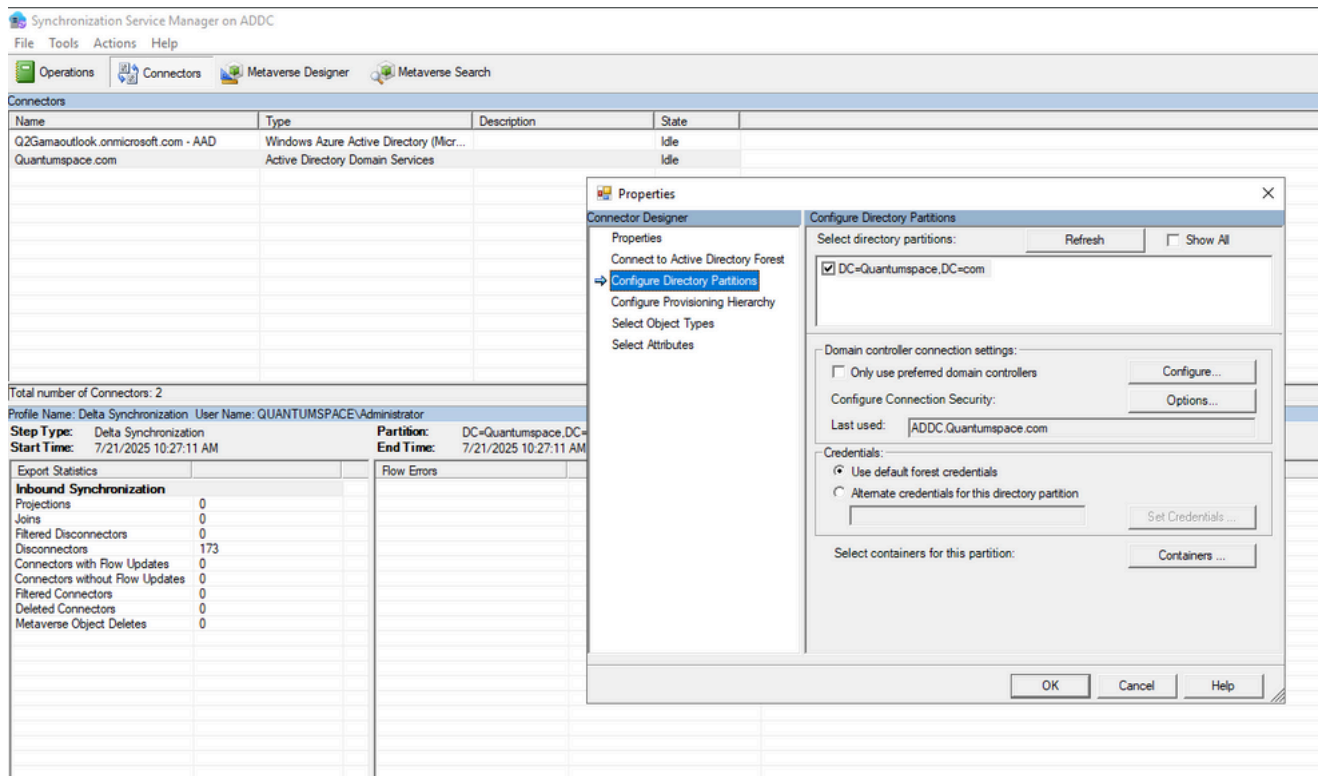
- If incase getting 'waiting export confirmation' on the new object in AAD connector space search, then run an import operation on AAD connector. This will successfully sync the new object to Entra ID.

Types Of Filtering:

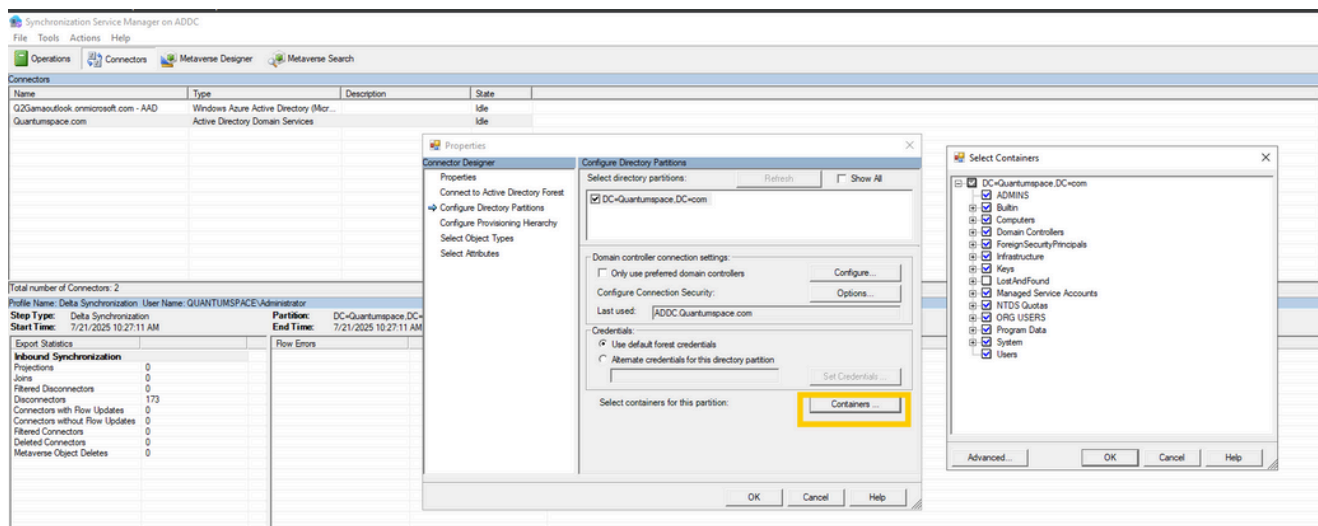
- **Group Based:** While installing the AAD connect setup, there comes an option to provide the DN of the group, that particular option is used to apply filtering to groups. This same can be achieved by sync rules, i.e. If a particular user belongs to a group then only sync to the cloud, or vice versa. Group based filtering are generally recommended during pilot phases or in testing environments, but for large enterprises attribute based filtering is always recommended.



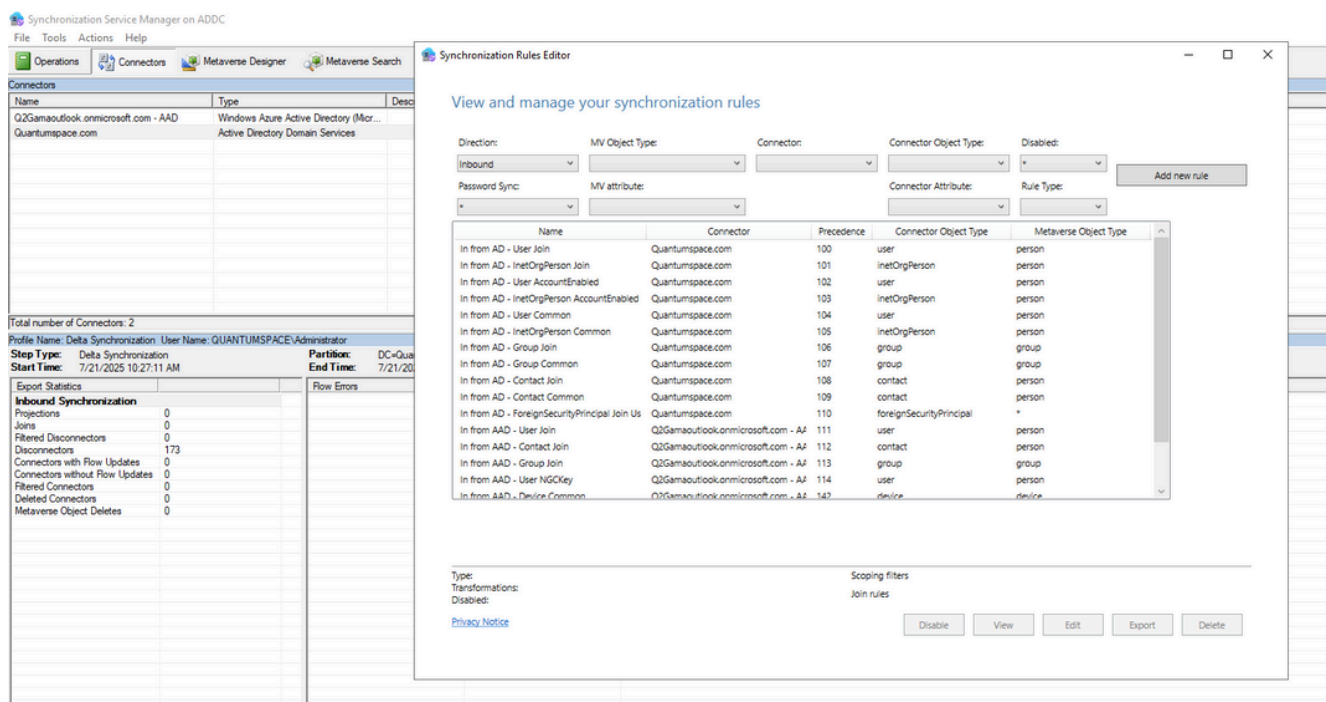
- **Domain Based:** This type of filtering prevents the entire domain to be synced with Entra ID. Incase any domain has several child domains, to not allow sync from any particular child domain, uncheck that particular domain from the console and the domain will not sync to the cloud. Go to local AD connector and right click to see the properties, in the configure directory partitions the domain will be listed. In below case only one domain is visible, but incase of multiple domains, uncheck the particular domain to not sync to Entra ID.



- **OU Based:** This type of filtering prevents the objects to be created in the connector space of local AD. At below, select the respective domain for OU filtering required, select the containers and give enterprise admin credentials to see the OUs listed. Here, check the OUs that are required to be synced.

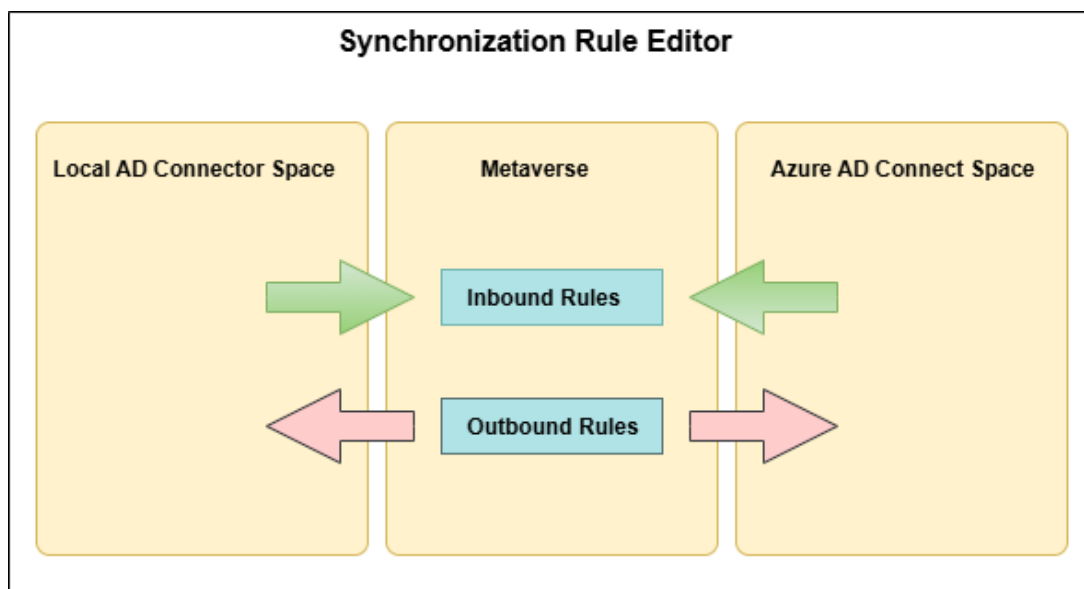


- **Sync Rules or Attribute Based:** For this type of filtering, synchronization rule editor is used. Filtering can be done on the basis of inbound and outbound rules. All the options visible below are for narrowing down the list of the rules that are associated with a particular object. Here different kind of values and attributes can be combined together to attach in a one single sync rule.



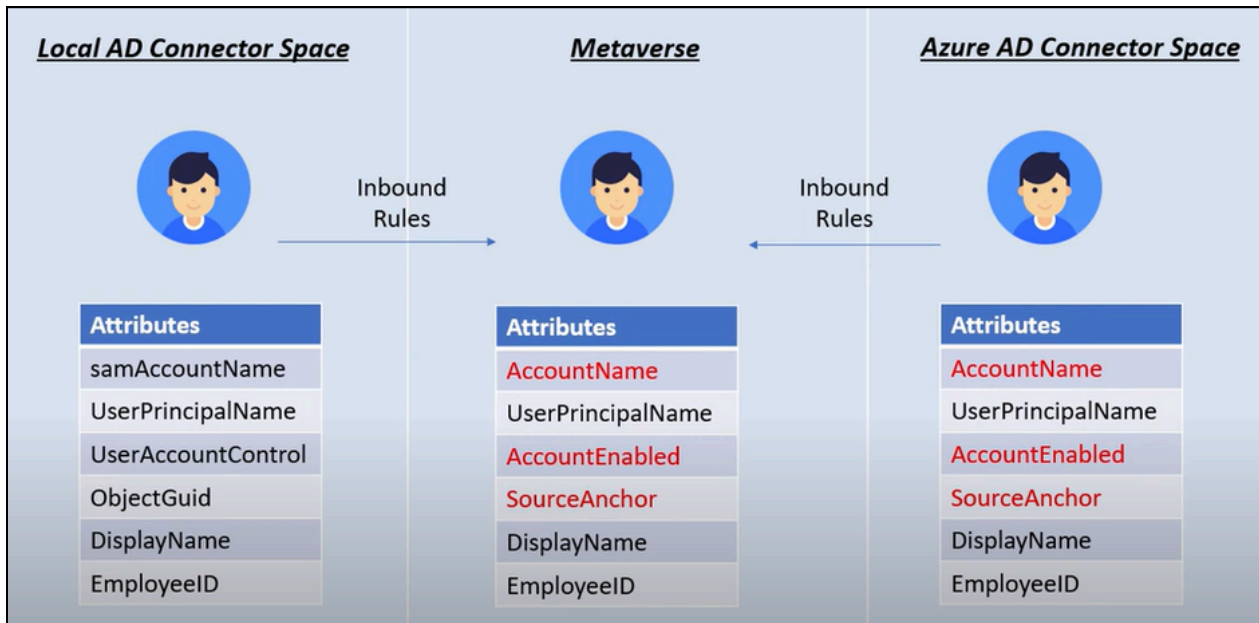
Synchronization Rule Editor:

Tool that lists all the sync rules. Through this, own custom sync rules can be created, basic fundamental of these rules is to define how attributes will be synced from On-prem to Entra ID(this is also called as attribute mapping).



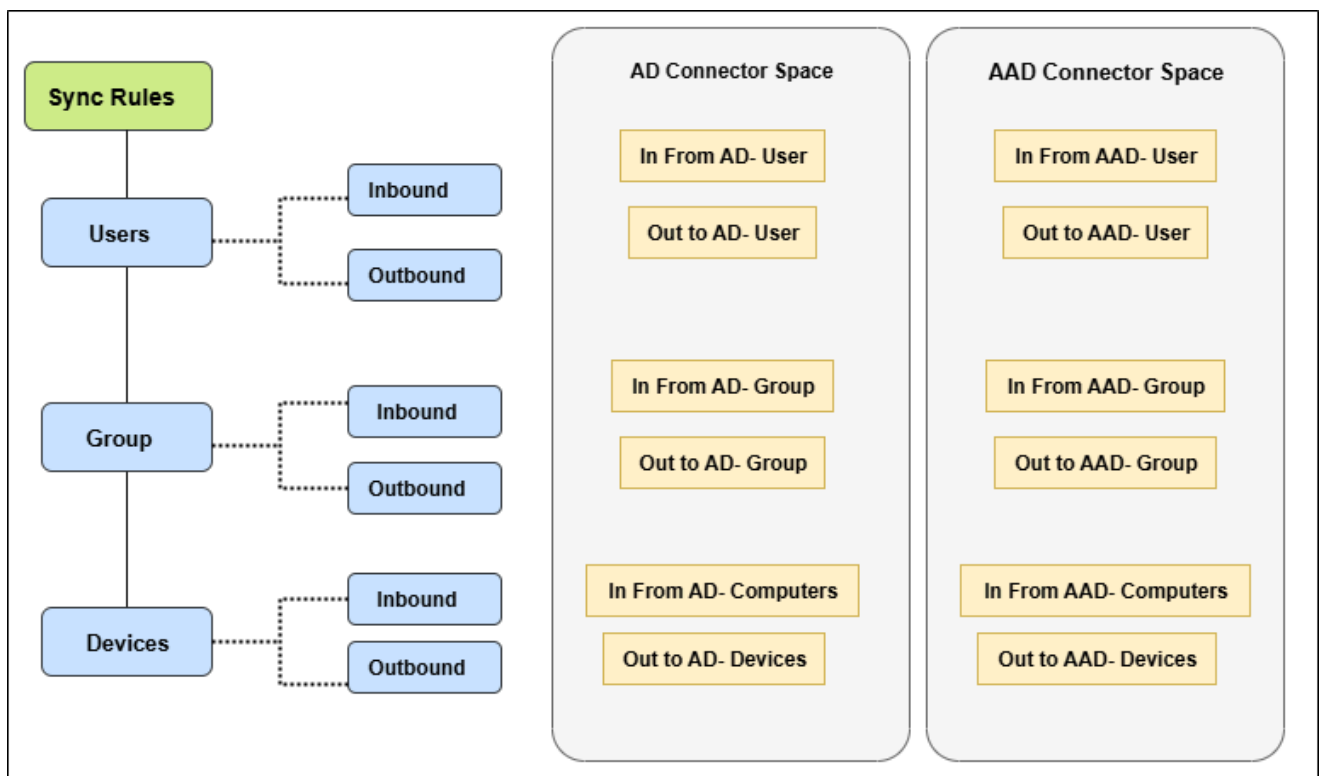
- When the information is being send from local AD connector space or AAD connector space to metaverse space, inbound rules are applied.
- When the information is being send from metaverse to both the connector spaces, then outbound rules are applied.

- All the attribute flow mapping, or getting the names of attributes changed as per the object type is defined in these rules itself.
- When an object is synced to Entra ID or when the replica of a particular object is created in the metaverse space from local AD connector, there are some changes in attribute names observed; like samAccountName is changed into AccountName. This means that attribute i.e. associated with user object type in metaverse is querying its corresponding attribute in local AD connector space.
- The same process happens for AAD connector space as well, when any attribute has to be written back to the local AD, there are inbound rules associated with AAD connector which write back the attributes from AAD connector space to metaverse, which then is synced with local AD.
- Likewise, same process goes for outbound rules, the attribute information will be write back from metaverse space to the connector spaces.



Sync Rule hierarchy:

- Sync rules are defined on the basis of object types, i.e. for every object type there will be a sync rule.
- User, Group and Device; these three object types can have same as well as different attributes. In order to define the attribute flow mapping for all the three object types, two different kinds of rules are created i.e. Inbound and Outbound rules.
- If there is a change that is updated in local AD connector space that has to be send to metaverse, then the inbound rule will be named as 'In from AD-object type'. The same will be followed for the AAD connector space.
- Hence, for each object type, there will be two categories of inbound and outbound rules created; first will be related to local AD connector space and the second for AAD connector space.
- Depending upon the direction of the attribute flow, the rules are named accordingly.



Connector Configuration & Attribute Flow Mapping:

Respective connector spaces are customizable by configuring each connectors as per requirements.

Example:

- Right click on the local AD connector> properties> Select object types

The screenshot shows the 'Synchronization Service Manager on ADDC' interface. The 'Connectors' tab is selected, displaying a table of connectors. The 'Q2Gamaoutlook.onmicrosoft.com - AAD' connector is highlighted. The 'Properties' dialog box is open, showing the 'Select Object Types' tab. The 'Object types' list includes: computer, contact, container, device, domainDNS, foreignSecurityPrincipal, group, inetOrgPerson, msDS-Device, organizationalUnit, and user. The 'user' checkbox is highlighted with a yellow box. A callout bubble points to the 'user' checkbox with the following text:

Here multiple object types are listed, when an import is run on the local AD connector these objects will get synced. For this example, uncheck the user and run import process on the local AD connector, when its finish no new user objects will get synced to Enrta ID

- Select attributes: Every object has multiple types of attributes associated with it. When a user object is created, there are certain default attributes that get populated automatically and are called mandatory attributes. There are also attributes that can be used as per sync requirements. Right click on the local AD connector> properties> Select attributes.

The screenshot shows the Synchronization Service Manager interface. A dialog box titled "Connector Space Object Properties" is open, displaying details for a user object. The "Distinguished Name" is "CN=Lily Potter,OU=ADMS,DC=Quantumspace,DC=com". The "Modification type" is "update" and the "Object type" is "user". Below this, the "Attribute information" table lists various attributes and their values.

Changes	Attribute Name	Type	Old Value	New Value
none	cn	string	Lily Potter	Lily Potter
none	countryCode	number	0	0
none	displayName	string	Lily Potter	Lily Potter
none	givenName	string	Lily	Lily
add	mS-DS-ConsistencyGuid	binary		D6 F4 D9 1C B2 8A E0 46 89 75 34 22 A...
none	objectGUID	binary	D6 F4 D9 1C B2 8A E0 46 89 75 34 22 A...	D6 F4 D9 1C B2 8A E0 46 89 75 34 22 A...
none	objectSid	binary	01 05 00 00 00 00 05 15 00 00 00 CF 8...	01 05 00 00 00 00 05 15 00 00 00 CF 8...
none	pwdLastSet	number	13396636889448131	13396636889448131
none	sAMAccountName	string	LilyPotter	LilyPotter
none	sn	string	Potter	Potter
none	userAccountControl	number	66048	66048
none	userPrincipalName	string	LilyPotter@Quantumspace.com	LilyPotter@Quantumspace.com

A yellow callout box points to the "Attribute information" table with the text: "Default attributes".

The screenshot shows the Synchronization Service Manager interface. A dialog box titled "Properties" is open, with the "Select Attributes" tab selected. The "Attributes" list on the right contains various attributes, some of which are checked. A yellow callout box points to the "Show All" button with the text: "If the required attribute is not getting listed, then check the show all box to get additional attributes to select from". Another yellow callout box points to the "manager" attribute, which is checked, with the text: "Here any listed attributes can be selected for sync, for example, to include the manager attribute to also sync, then check the box".

- To check the sync rules applied for an object; in metaverse search> double click on the object to see properties.

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 15 of 15 matching records

Search Results

display Name	Value	Contributing MA	Sync Rule	Type	Last Modified
DnsAdmins	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	boolean	7/21/2025 9:34:17 AM
DnsUpdateProxy	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
Uly Potter	Mark	QuantumSpace.c...	In from AAD - User Join	string	7/21/2025 10:21:47 AM
DHCP Users	Mark	QuantumSpace.c...	In from AAD - User Join	string	7/21/2025 10:21:47 AM
DHCP Administrators	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
ClientA	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
Peter Parker	Mark	QuantumSpace.c...	In from AD - User Common	number	7/21/2025 9:34:17 AM
ADDC	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
ADSyncOperators	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
ADSyncBrowse	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
ADSyncPasswordSet	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
MSOL_6b744430c811	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
ADSyncAdmins	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
Mark	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM

Metaverse Object Properties

Unique identifier (GUID): {77984C8B-5066-F011-8592-080027E6F25A}

Display Name: Mark

Object type: person

Attributes Connectors

Attribute Name Value Contributing MA Sync Rule Type Last Modified

accountEnabled true QuantumSpace.c... In from AD - User AccountEnabled boolean 7/21/2025 9:34:17 AM

accountName Mark QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

cloudAnchor User_a01d13efbfe3-4626-94a3-afa43... Q2Gamaoutlook... In from AAD - User Join string 7/21/2025 10:21:47 AM

cloudSourceAnc... T5mx704wmE+WWb9niNaacQ== Q2Gamaoutlook... In from AAD - User Join string 7/21/2025 10:21:47 AM

cn Mark QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

contributingConn... (87560b5b-a994-4987-871c-8ec75be6... QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

countryCode 0 QuantumSpace.c... In from AD - User Common number 7/21/2025 9:34:17 AM

displayName Mark QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

distinguishedName CN=Mark,CN=Users,DC=Quantumspa... QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

domainFQDN Quantumspace.com QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

domainNetBios QUANTUMSPACE QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

forestNetBos QUANTUMSPACE QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

givenName Mark QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

objectSid 01 05 00 00 00 00 00 05 15 00 00 00 ... QuantumSpace.c... In from AD - User AccountEnabled binary 7/21/2025 9:34:17 AM

objectSidString S-1-5-21-3608316367-3712562522-32... QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

onPremisesObjec... 4F 99 B1 EC EE 30 98 4F 96 29 BF 27... QuantumSpace.c... In from AD - User AccountEnabled binary 7/21/2025 9:34:17 AM

pwdLastSet 20250721161638.0Z QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

sourceAnchor T5mx704wmE+WWb9niNaacQ== QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

sourceAnchorBin... 4F 99 B1 EC EE 30 98 4F 96 29 BF 27... QuantumSpace.c... In from AD - User Join binary 7/21/2025 9:34:17 AM

sourceObjectType User QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

userPrincipalName Mark@Quantumspace.com QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

Close Help

These are the sync rules applied for user object: Mark with the attribute names

- To check all the inbound connector rules, launch synchronization tool editor. It is not recommended to edit the inbound rules rather create custom rules as per requirements.

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 15 of 15 matching records

Search Results

display Name	Value	Contributing MA	Sync Rule	Type	Last Modified
DnsAdmins	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	boolean	7/21/2025 9:34:17 AM
DnsUpdateProxy	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
Uly Potter	Mark	QuantumSpace.c...	In from AAD - User Join	string	7/21/2025 10:21:47 AM
DHCP Users	Mark	QuantumSpace.c...	In from AAD - User Join	string	7/21/2025 10:21:47 AM
DHCP Administrators	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
ClientA	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
Peter Parker	Mark	QuantumSpace.c...	In from AD - User Common	number	7/21/2025 9:34:17 AM
ADDC	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
ADSyncOperators	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
ADSyncBrowse	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
ADSyncPasswordSet	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM
MSOL_6b744430c811	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
ADSyncAdmins	Mark	QuantumSpace.c...	In from AD - User Common	string	7/21/2025 9:34:17 AM
Mark	Mark	QuantumSpace.c...	In from AD - User AccountEnabled	string	7/21/2025 9:34:17 AM

Metaverse Object Properties

Unique identifier (GUID): {77984C8B-5066-F011-8592-080027E6F25A}

Display Name: Mark

Object type: person

Attributes Connectors

Attribute Name Value Contributing MA Sync Rule Type Last Modified

accountEnabled true QuantumSpace.c... In from AD - User AccountEnabled boolean 7/21/2025 9:34:17 AM

accountName Mark QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

cloudAnchor User_a01d13efbfe3-4626-94a3-afa43... Q2Gamaoutlook... In from AAD - User Join string 7/21/2025 10:21:47 AM

cloudSourceAnc... T5mx704wmE+WWb9niNaacQ== Q2Gamaoutlook... In from AAD - User Join string 7/21/2025 10:21:47 AM

cn Mark QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

contributingConn... (87560b5b-a994-4987-871c-8ec75be6... QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

countryCode 0 QuantumSpace.c... In from AD - User Common number 7/21/2025 9:34:17 AM

displayName Mark QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

distinguishedName CN=Mark,CN=Users,DC=Quantumspa... QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

domainFQDN Quantumspace.com QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

domainNetBios QUANTUMSPACE QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

forestNetBos QUANTUMSPACE QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

givenName Mark QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

objectSid 01 05 00 00 00 00 00 05 15 00 00 00 ... QuantumSpace.c... In from AD - User AccountEnabled binary 7/21/2025 9:34:17 AM

objectSidString S-1-5-21-3608316367-3712562522-32... QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

onPremisesObjec... 4F 99 B1 EC EE 30 98 4F 96 29 BF 27... QuantumSpace.c... In from AD - User AccountEnabled binary 7/21/2025 9:34:17 AM

pwdLastSet 20250721161638.0Z QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

sourceAnchor T5mx704wmE+WWb9niNaacQ== QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

sourceAnchorBin... 4F 99 B1 EC EE 30 98 4F 96 29 BF 27... QuantumSpace.c... In from AD - User Join binary 7/21/2025 9:34:17 AM

sourceObjectType User QuantumSpace.c... In from AD - User Common string 7/21/2025 9:34:17 AM

userPrincipalName Mark@Quantumspace.com QuantumSpace.c... In from AD - User AccountEnabled string 7/21/2025 9:34:17 AM

Synchronization Rules Editor

View an... onization rules

Direction: Inbound Outbound

Connector: MW attribute

Connector Object Type: Disabled: *

Connector Attribute: Rule Type: *

Add new rule

Name	Connector	Precedence	Connector Object Type	Metaverse Object Type
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 - A4	111	user	person
In from AAD - Contact Join	Q2Gamaoutlook.onmicrosoft.com - A4	112	contact	person
In from AAD - Group Join	Q2Gamaoutlook.onmicrosoft.com - A4	113	group	group
In from AAD - User NGOKey	Q2Gamaoutlook.onmicrosoft.com - A4	114	user	person
In from AAD - Device Common	Q2Gamaoutlook.onmicrosoft.com - A4	142	device	device

Type: Transformations: Disabled: Privacy Notice

Scoping Filters: Join rules

Disable View Edit Export Delete

In from AD-means object data coming from local AD connector

In from AAD-means object data coming from Azure AD connector

To check all inbound or outbound rules filter direction option

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 Metaverse Object Properties

Unique identifier (GUID): {779B4C8B-5066-F011-8592-080027E6F25A}

Display Name: Mark

Object type: person

Attributes | Connectors

Retrieved 150

Attribute Name	Value	Contributing MA	Sync Rule	Type	Last
accountEnabled	true	Quantumspace c...	In from AD - User AccountEnabled	boolean	7/21
displayName	Mark	Quantumspace c...	In from AD - User Common	string	7/21
dnshostname	quantumspace.com	Quantumspace c...	In from AD - User Common	string	7/21
cloudAnchor	User_g01d13f8fe3-4626-94a3-af43...	Quantumspace c...	In from AD - User Join	string	7/21
cloudSourceInc...	T5m704mE-WWb3hNascQ++	Quantumspace c...	In from AD - User Join	string	7/21
cn	Mark	Quantumspace c...	In from AD - User AccountEnabled	string	7/21
DHCP Users	Quantumspace c...	Quantumspace c...	In from AD - User Common	string	7/21
DHCP Administ...	Quantumspace c...	Quantumspace c...	In from AD - User Common	string	7/21
ClientA	Quantumspace c...	Quantumspace c...	In from AD - User Common	string	7/21
Peter Parker	Quantumspace c...	Quantumspace c...	In from AD - User Common	string	7/21
ADDC	Quantumspace c...	Quantumspace c...	In from AD - User Common	string	7/21
ADSyncOperati...	Quantumspace c...	Quantumspace c...	In from AD - User AccountEnabled	string	7/21
ADSyncBrowse	Quantumspace c...	Quantumspace c...	In from AD - User AccountEnabled	string	7/21
ADSyncPasswo...	Quantumspace c...	Quantumspace c...	In from AD - User AccountEnabled	string	7/21
MSOL_g07444	Quantumspace c...	Quantumspace c...	In from AD - User AccountEnabled	string	7/21
ADSyncAdmne	Quantumspace c...	Quantumspace c...	In from AD - User Common	string	7/21
Mark	Quantumspace c...	Quantumspace c...	In from AD - User Common	string	7/21

Close

Synchronization Rules Editor

View and manage your synchronization rules

Direction: Inbound MV Object Type: person Connector: Quantumspace.com Connector Object Type: user Disabled: *

Password Sync: * MV attribute: * Connector Attribute: * Rule Type: *

Add new rule

Name	Connector	Precedence	Connector Object Type	Metaverse Object Type
In from AD - User Join	Quantumspace.com	100	user	person
In from AD - User AccountEnabled	Quantumspace.com	102	user	person
In from AD - User Common	Quantumspace.com	104	user	person

When an information is coming from local AD connector space to metaverse these 3 rules will contribute to all the attributes associated with object type user

Type: Transformations: Disabled: Join rules: Disable View Edit Export Delete

Privacy Notice

Synchronization Rules Editor

View and manage your synchronization rules

Direction: Inbound MV Object Type: person Connector: Quantumspace.com Connector Object Type: user Disabled: *

Password Sync: * MV attribute: * Connector Attribute: * Rule Type: *

Add new rule

Name	Connector	Precedence	Connector Object Type	Metaverse Object Type
In from AD - User Join	Quantumspace.com	100	user	person
In from AD - User AccountEnabled	Quantumspace.com	102	user	person
In from AD - User Common	Quantumspace.com	104	user	person

In from AD - User Common

Type: Transformations: Disabled: Join rules: 1 0 Disable View Edit Export Delete

Privacy Notice

tmpACB3.tmp - Notepad

File Edit Format View Help

```
-Source '@('dn')`
-Destination 'distinguishedName`
-FlowType 'Direct`
-ValueMergeType 'Update`
-OutVariable syncRule

Add-ADSyncAttributeFlowMapping `
-SynchronizationRule $syncRule[0] `
-Destination 'accountEnabled`
-FlowType 'Update`
-Expression 'IIF(BitAnd([userAccountControl],2)=0,True,False)`
-OutVariable syncRule

Add-ADSyncAttributeFlowMapping `
-SynchronizationRule $syncRule[0] `
-Source '@('sAMAccountName')`
-Destination 'accountName`
-FlowType 'Direct`
-ValueMergeType 'Update`
-OutVariable syncRule

Add-ADSyncAttributeFlowMapping `
-SynchronizationRule $syncRule[0] `
-Source '@('assistant')`
-Destination 'assistant`
-FlowType 'Direct`
-ValueMergeType 'Update`
-OutVariable syncRule
```

As this is an inbound rule, the information is coming from local AD connector to metaverse. Similarly for all sync rules all applied attribute details can be checked by 'Export' option

Attribute associated with local AD connector

Attribute associated with metaverse

