

ADSearch User Guide

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Welcome

ADSearch from Winzero provides a query-based interface that allows network administrators and assigned IT personnel to easily build custom queries for issues specific to their network.

ADSearch queries Windows 2000/2003 Global Catalogs and Active Directories in multiple domains and across forests from a central console, allowing you to perform customized searches by domain, object, object property and by using wildcards. ADSearch search results can be set to any or all object properties.

Features

Key Features of ADSearch:

- Multi Mode
ADSearch can be installed in either Administrative Mode or Help Desk/Support Mode.
- Central Console
Allows you to query multiple domains and forests from one central console.
- Expandable properties list for domains, OUs, groups, users, computers, printers and published shares.

With ADSearch you can:

- Export search results to MS Excel
- Address standards compliance issues
- Maintain naming standards and policies
- Validate objects to enforce corporate or security policies.

Requirements

- You must be a domain administrator - member of the Domain Admins Group
- You must be logged on to a computer using a Windows 2000/2003 or Windows XP operating system that is a member of a Windows 2000/2003 domain.



If you are not logged on to a Windows 2000/2003 Domain, AD Search cannot display AD object properties.

Installation

Administrative Mode vs. Help Desk/Support mode

You can set up ADSearch during installation to run in either Administrative mode or Help Desk/Support mode.

Administrative mode

The default setting on installation of ADSearch. The current user account (the account that you are logged on to the network with when you run ADSearch) is used to query the Global Catalog and the Active Directory.

Help Desk/Support Mode

Uses a proxy account and password setup during installation of ADSearch to query the Global Catalog and Active Directory.

- Allows an administrator to delegate ADSearch query rights to help desk and support staff without granting administrative rights to the end user.
- Allows an administrator to span multiple forests using proxy rights. Proxy rights can be granted to allow queries without granting user rights in the queried forest.

	Administrative Mode	Help Desk/Support Mode
Installation	Default installation.	The proxy account used to query the Global Catalog and Active Directory is set up during installation by a real administrator.
Access Rights	The current user must have administrative rights to all of the domains that you are querying.	The current user does not require administrative or delegated rights in the domains being queried.
Performing Queries	Can perform queries in all domains that you have administrative rights to.	Can perform queries based on the rights of the proxy account set up by a real administrator during installation.
Advanced Modify Feature	Advanced Modify feature is enabled. Administrators can add, remove or change object property attributes of the queried objects.	Advanced Modify feature is disabled. Proxy account users cannot modify object property attributes of queried objects.

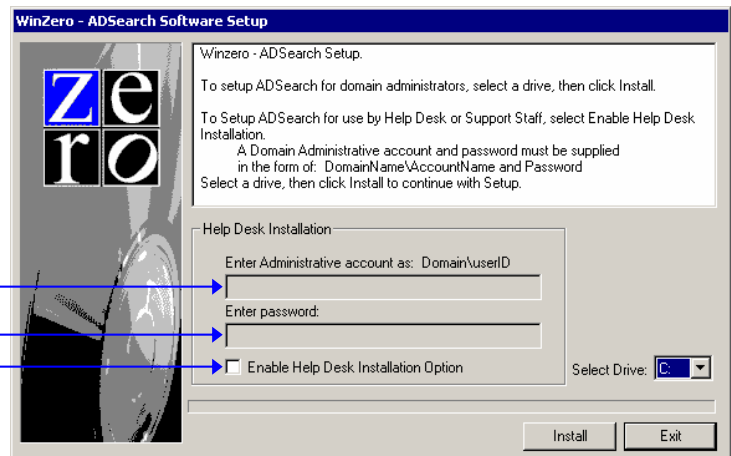
 **Note:** The title bar in the main program screen indicates that you are using Help Desk/ Support mode.

To install ADSearch in Administrative mode

1. Click the Select Drive drop down box and **select a drive**.
2. Click **Install**.
3. Click Exit when the installation is complete.

To install ADSearch in Help Desk/Support mode

1. Click the checkbox **Enable Help Desk Installation Option**.
2. **Type the Administrative (proxy) account in the form Domain\userID** in the Enter Administrative account box.
3. **Type the password for the Administrative account** in the Enter password box.



4. Click the Select Drive drop down box and **select a drive**.
5. Click **Install**.
6. Click **Exit** when the installation is complete.

Best Practices

Check Access Rights

You must be logged on to a Windows 2000/2003 Domain.

- Global Catalogue to set AD Object Attributes.

If you are searching a single domain, you must have Domain Admin rights to the domain.

If you are searching domains and child domains, you must have Enterprise Admin rights to the domain tree

Ensure that DNS Servers are configured correctly so that ADSearch has access to the Global Catalog.

Ensure that non-existent or broken trusts relationships do not exist.

- existent domains, slowing the search.

Help Desk /Support Mode Proxy Rights

Create a generic account as the proxy account with sufficient rights rather than using an existing Administrator account.

To Query Share Information

When Querying Share (Volume) information, Shares must be published to Active Directory.

- are not published to Active Directory, ADSearch will not retrieve results.

Additional Resources


- Additional modification information for the Advanced Modify feature can be found at the following:
MSDN Library CD – Platform SDK Documentation\Networking and Directory Services\Directory Services\Active Directory\Active Directory Reference\Active Directory Schema\Windows 2000 Schema\Attributes.
MS MSDN Website
- For product support go to <http://www.winzero.ca>
- For more information about ADSearch or any other Winzero products, please visit our website at <http://www.winzero.ca>
- Blog: <http://adsearch-winzero.blogspot.com>

How to Use ADSearch

Using AD Search

To use AD Search to search for specific object properties, you must select the domain to search in and your search criteria. Search criteria include the type of object and the type of property to search by.

- When you select an object type to search by, the available properties for that object are listed in the Property Type popup window list as well as the Search For popup window. This list varies by object type.
- You can narrow your search results by typing known property information in the Known Property box. You can use wildcards in your search criteria.
- If you do not type information in the Known Property box, the default "All" will search for all of the instances of the property that you select for the object type that you select.

 **Note:** Each time you start a new search you must reselect the search criteria. Once you complete a search, the search properties are cleared..

What you can search for

- You use ADSearch to search for Active Directory (AD) object properties.
- You can search for AD properties of the following objects:
 - Computer
 - Domain
 - Group
 - OrganizationalUnit (OU)
 - PrinterQueue
 - Volume (Shared Folders)
 - User
- The AD properties that you can search for depends on the object that you select as part of the search criteria.

How to perform a search

To perform a search

1. Click the Search button and **select the Domain** to search for properties in and Click OK.
2. **Select the type of object** to search in the popup Window. Click OK.
3. **Select the property** to search by in the popup Window. Click OK.
4. **Type the property information** to search by to narrow the property search criteria. If you do not type information and select "ALL", all of the attributes of the type you select will be listed in the results window. Click OK.
5. In the Results Window, **select the property to attributes to display**. (You can use the Shift or the Ctrl keys to select more than one property to display.)
6. Click OK.

Results are listed in the Results window.


Example:

You would like to find all user names with 555 in their telephone number.

1. Select the Domain to search in.
2. Select **user** as the object type.
3. Select **telephoneNumber** as the Property.
4. Type ***555*** in the Known Property box.
5. Select **name** in the Search For window.
6. Click Begin Search.

Result:

The names of all users in the domain with 555 in their telephone number will be listed in the Results Window.

 **Note:** In the above example, if you do not type information in the Known Property box, and search using the default "All", the names of all the users in the domain and their telephone numbers will be listed in the Results window even if the telephone number is blank.

Results

Results are listed in the Results window.

- A column heading is displayed in the Result window for each AD property you select to search for.
- You can click and drag the column headers to view more information for each column.
- If you have a large number of results, click and drag the scroll bar at the bottom of the Results window to view results that don't fit in the window.



If results appear to take a long time to retrieve:

- DNS server may not be properly configured.
- There may be broken trust relationships - ADSearch is querying sub domains that are not reachable.
- The account or proxy account may not have adequate rights to the domain being queried. Check user rights.

Saving Results

You can save the results of your search as a text file or as an MS Excel file.

- Result files are saved in the ADSearch\Reports folder.
- Text files are named with a time stamp.
- You are prompted to name MS Excel files; however, you cannot change the path. MS Excel files are saved in Reports folder.



If you have searched for a large amount of information, we recommend you save results as an MS Excel file as the text file does not have columns. Once you save the results as an MS Excel file, you can easily format the columns to a more readable format.

To save results as a text file:

1. Click **File**.
2. Select **Save Search Results**.

To save results as an MS Excel file:

1. Click **File**.
2. Select **Export as MS Excel File**.
3. **Type a name** for the file.

4. Click **OK**.

Viewing and Managing Reports

You can view and delete result reports that you have saved as a text file.

To view and manage reports saved as a text file:

1. On the menu bar, click **View**.
2. Click **View and Manage Reports**.
3. In the ADSearch Manage Reports window, **select the report** to view or delete.
4. Click **Delete** to delete the report
Or
Click **View** to view the report.
5. When you have finished managing the reports, click **Exit**.

Advanced Feature

The Advanced feature is only available in Administrative Mode and is disabled when you install ADSearch in Help Desk/Support mode.

The Advanced feature allows you to expand or restrict search criteria by modifying the predefined list of object property types that ADSearch uses to search the Global Catalog and Active Directory.

The Object Property Types List

The Object Property Types list in ADSearch is a list of MS Windows 2000/2003 schema attributes that can be searched for each object type.

ADSearch can only return search results if the attribute is populated with information. If the attribute is not populated, ADSearch will return a blank field for that object property type.

 **Note:** The following object property types have been changed for easier recognition:

MS Schema Attribute	ADSearch Object Property Type
c	AbrevCountry
cn	CommonName
co	Country
dc	DomainName
l	City
sn	Surname
st	State-Province

Modifying the Object Property Types List

You can modify the Object Property Types list that ADSearch uses to perform searches by adding or deleting object property types for the following object types:

- Domains
- OU's
- Groups
- Users
- Computers
- Shares (Volume)
- Printers

For a list of the object property types that ADSearch has available for each object type, *please refer to the Object Property Definition Tables beginning on page 14* of this guide.



Object Property Types that you add to the Object Property Types List, must meet the following criteria:

- **The object property type must exist.**
The object property type must exist as MS Windows 2000 Active Directory Schema Attribute.
- **The object property type is case sensitive.**
When modifying object property types, enter their attributes exactly as spelled.
- **The object property type must be populated.**
If there is no information attached to the object property type, ADSearch will search the attribute and return blank fields.

Additional Resources on Object Property Types

Additional information on MS Windows 2000 Schema Attributes can be found at the following:

MSDN Library CD:

Platform SDK Documentation\Networking and Directory Services\Directory Services\Active Directory\Active Directory Reference\Active Directory Schema\Windows 2000 Schema\Attributes.


MS MSDN Website

How to Modify Object Property Types

To modify object property types:

1. On the menu bar, click **Advanced**, and then click **Edit Object Properties**.
2. Select the **Object Type** to modify.
3. Click **Modify**.
4. **Select an object property type** from Object Properties Type list to remove, and then click **Remove**
OR
Type the new Object Property type, and then click **Add**.
5. Scroll down the Object Properties Type list to verify the change.
6. Click **Exit** when you have completed modifying the Object Properties Type list.

The modified object property type list can be viewed in the Property Type list of the ADSearch main window.

 **Note:** If you have modified, ADSearch Property Types, you can restore the default list by using the Restore function. Refer to page 13 of this guide.

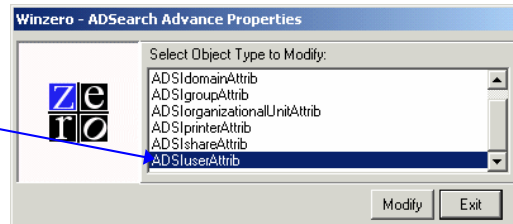
Example of Modifying Object Property Types

You would like to add the object property type “maxStorage” to the object type “user”.

1 On the menu bar, click **Advanced**, and then click **Edit Object Properties**.

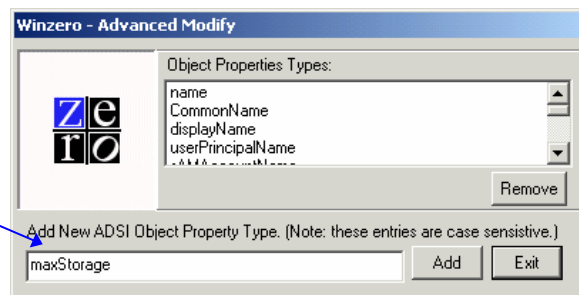
2 In the Select Object Type list, select **ADSIuserAttrib**.

3 Click **Modify**.



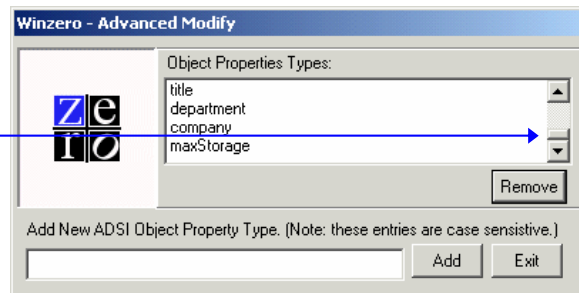
4 Type the new Object Property Type **maxStorage**.

5 Click **Add**.



6 Scroll down to view the new entry.

7 Click **Exit**.



The new property type is listed in the Property Type list of the ADSearch main window.


Modifying a Help Desk/Support User’s Access to Search Criteria.

Assuming that the Help Desk/Support user has ADSearch installed on their workstation in Help Desk/Support mode, the Advanced feature to modify object properties is disabled. To change access to search criteria:

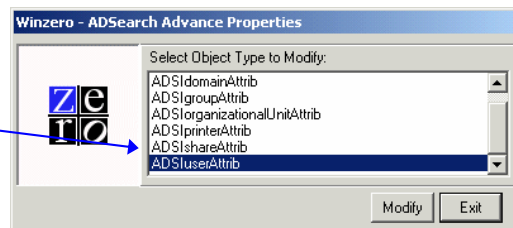
1. Change ADSearch mode on the user’s workstation from Help Desk/Support mode to Administrative mode using Windows Registry Editor.
2. Modify the Object Property list in ADSearch.
3. Return to Windows Registry Editor to change ADSearch mode back to Help Desk/Support mode.

Example of Modifying a Help Desk/Support User's Access to Search Criteria.

You would like to restrict a Help Desk/Support mode user's search criteria so that they cannot access the object property type "otherTelephone".

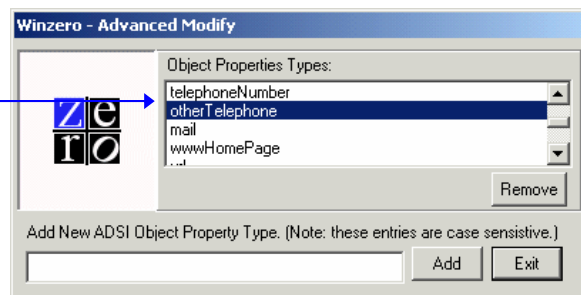
- 1 Use your personal Administrative account to **log on to the end user's workstation.**
- 2 Use Registry Editor to **reset ADSearch to Administrative Mode** as follows:
 1. Click , and then click **Run...**
 2. Type **Regedit**, and then click **OK.**
 3. In the Registry Editor window, **double-click HKEY_LOCAL_MACHINE.**
 4. Select **SOFTWARE\WinZero\ADSearch.**
 5. **Double-click the HelpDesk key to Edit String.**
 6. In the Value data field, type **0** (if you are in Help Desk/Support this value is 1).
 7. Click **OK.**
 8. Close Registry Editor.
- 3 **Start ADSearch** – the Advanced feature is now available.
- 4 On the ADSearch menu bar, click **Advanced**, and then click **Edit Object Properties.**

- 5 In the Select Object Type list, select **ADSIuserAttrib.**



- 6 Click **Modify.**

- 7 In the Object Properties Types list, click **otherTelephone.**




- 8 Click **Remove.**

- 9 Click **Exit.**

- 10 Close ADSearch program.

- 11 Use Registry Editor to **reset ADSearch to be in Help Desk/Support mode:**

1. Click , and then click **Run...**
2. Type **Regedit**, and then click **OK.**
3. In the Registry Editor window, **double-click HKEY_LOCAL_MACHINE.**
4. Select **SOFTWARE\WinZero\ADSearch.**
5. **Double-click the HelpDesk key to Edit String.**
6. In the Value data field, type **1** (if you are in Administrative mode this value is 0).
7. Click **OK.**
8. Close Registry Editor.

- 12 Log off the workstation.

Backup and Restore

Before you modify the Object Property Type list, we recommend that you backup your current list.

To backup the current Object Property List:

1. On the menu bar, click **Advanced**.
2. Click **Backup Object Property Types**.
3. Click **OK**.

You can restore Object Property Type lists that you have modified and backed up or you can restore the ADSearch default Object Property Type list.

To restore an Object Property list that you modified and backed up:

1. On the menu bar, click **Advanced**.
2. Click **Restore**, and then select **Restore Last Backed up Object Property Types**.
3. Click **OK**.

To restore the ADSearch default Object Property list:

1. On the menu bar click **Advanced**.
2. Click **Restore**, and then select **Restore Default Object Property Types**.
3. Click **OK**.

Object Property Definition Tables

Computer Properties Table

Property Name	Description
CommonName	The name that represents an object. Used to perform searches.
description	The text description of the computer.
distinguishedName	The full path to the object, including the object name and all parent objects to the root of the domain, the distinguished name uniquely and unambiguously identifies an object within a domain hierarchy(also known as a "DN").
dNSHostName	Name of the computer as registered in DNS.
location	The computer's location such as office number.
logonCount	The number of successful times a user logged on to this computer.
managedBy	The distinguished name of the user that is assigned to manage this computer.
memberOf	The distinguished names of the groups that this computer account belongs to.
name	The name that represents the computer. Same as Common Name.
operatingSystem	The Operating System name (e.g. Windows NT).
operatingSystemHotfix	The hotfix level of the operating system.
operatingSystemServicePack	The Operating System Service Pack ID String (e.g. SP3).
operatingSystemVersion	The Operating System Version (e.g. 4.0).
operatorCount	The number operators on this computer.
preferredOU	The Organizational Unit to show by default on user' s desktop.
rIDSetReferences	List of references to RID-Set objects managing Relative Identifier (RID) allocation.
samAccountName	The logon name used to support clients and servers from a previous version of Windows (such as Windows NT 4.0 and earlier, Windows 95, Windows 98, and LAN Manager).
servicePrincipalName	List of principal names used for mutual authentication with an instance of a service on this machine.
userCertificate	Contains the DER-encoded X509v3 certificates issued to the user. Note that this property contains the public key certificates issued to this user by Microsoft Certificate Service.
userSharedFolder	Specifies a UNC path to the computer's shared folder. The path must be a network UNC path of the form \\server\share\directory. This value can be a null string.
volumeCount	The tracked volume quota for a given computer.

Domain Properties Table

Property Name	Description
allowedAttributes	Attributes that are permitted to be assigned to the domain.
allowedAttributesEffective	A list of attributes that can be modified on the domain.
allowedChildClasses	Classes that may be contained by a class.
allowedChildClassesEffective	A list of classes that can be modified.
canonicalName	The name of the object in canonical format. e.g. me.domain.com
description	The text description for the domain.
distinguishedName	The full path to the object, including the object name and all parent objects to the root of the domain. The distinguished name uniquely and unambiguously identifies an object within a domain hierarchy. Also known as a "DN".
DomainName	The naming attribute for Domain and DNS objects. Usually displayed as dc=DomainName.
fSMORoleOwner	Flexible Single-Master Operation: The distinguished name of the DC where the schema can be modified.
isCriticalSystemObject	IF True, the domain hosting this attribute must be replicated during installation of a new replica.
lockoutThreshold	The number of invalid logon attempts to permit before the account is locked out.
managedBy	The distinguished name of the user that is assigned to manage this domain.
masteredBy	Backlink for Has-Master-NCs attribute. The distinguished name for its NTDS Settings objects.
minPwdLength	The minimum number of characters that a password must contain.
name	The Relative Distinguished Name of the domain.
nTMixedDomain	Indicates that the domain is in native mode or mixed mode. 1 indicates mixed mode, 0 indicates native mode.
objectCategory	An object class name used to group objects e.g. Person
objectClass	The list of classes from which this class is derived.
objectGUID	The unique identifier for an object.
ridManagerReference	The distinguished name for the RID Manager of the Domain.
subSchemaSubEntry	The distinguished name for the location of the subschema object where a class or attribute is defined.
treeName	DNS name of the domain at the root of a tree.
wellKnownObjects	Contains a list of system containers by GUID and Distinguished Name. This permits retrieving an object after it has been moved by using just the GUID and the domain name. Whenever the object is moved, the system will automatically update the distinguished name.
whenChanged	The date when this domain was last changed.
whenCreated	The date when this domain was created.

Group Properties Table

Property Name	Description
canonicalName	The name of the group in canonical format. e.g. group.domain.com.
CommonName	The name that represents an object. Used to perform searches.
description	Contains the text description for an this group.
distinguishedName	The full path to the object, including the object name and all parent objects to the root of the domain, the distinguished name uniquely and unambiguously identifies an object within a domain hierarchy(also known as a "DN").
info	Notes or comments on the group account.
mail	The group's e-mail address.
managedBy	The distinguished name of the user that is assigned to manage this group.
member	The list of groups to which this group belongs.
memberOf	The distinguished name of the groups to which this group belongs.
name	The Relative Distinguished Name of the group.
objectCategory	An object class name used to group objects e.g. Person
objectClass	The list of classes from which this group is derived.
sAMAccountName	The logon name used to support clients and servers from a previous version of Windows (such as Windows NT 4.0 and earlier, Windows 95, Windows 98, and LAN Manager).
whenChanged	The date when this group was last changed.
whenCreated	The date when this group was created.

Organizational Unit (OU) Objects Table

An Active Directory container object used within domains. An organizational unit (OU) is a logical container into which users, groups, computers, and other organizational units are placed.

Property Name	Description
abbrevCountry	The country in the user's address. The country is represented as the 2-character country code.
businessCategory	Descriptive text for an Organizational Unit.
canonicalName	The name of the OU in canonical format. e.g. me.domain.com.
City	The town or city in the OU's address.
Country	The country in which the OU is located.
countryCode	Specifies the country code for the user's language of choice. This value is not used by Windows 2000.
description	Contains the text description for an this OU..
distinguishedName	The full path to the object, including the object name and all parent objects to the root of the domain, the distinguished name uniquely and unambiguously identifies an object within a domain hierarchy(also known as a "DN").
facsimileTelephoneNumber	The fax number of the OU.
managedBy	The distinguished name of the user that is assigned to manage this OU.
masteredBy	Backlink for Has-Master-NCs attribute. The distinguished name for its NTDS Settings objects.
modifyTimeStamp	The date when this OU was last changed.
name	The Relative Distinguished Name of the OU.
objectCategory	An object class name used to group objects e.g. Person
objectClass	The list of classes from which this OU is derived.
ou	The name of the organizational unit.
physicalDeliveryOfficeName	Contains the office location for the OU.
postalAddress	The mailing address for this OU.
postalCode	The postal or zip code for mail delivery
postOfficeBox	The P.O. Box number for this OU.
preferredDeliveryMethod	
State-Province	The state or province for this OU.
street	The street address.
telephoneNumber	The primary telephone number.
whenChanged	The date when this OU was last changed.
whenCreated	The date when this OU was created.

Printer Properties Table

Property Name	Description
assetNumber	The tracking number for the printer.
CommonName	The name that represents an object. Used to perform searches.
description	The text description of the printer.
distinguishedName	The full path to the object, including the object name and all parent objects to the root of the domain, the distinguished name uniquely and unambiguously identifies an object within a domain hierarchy(also known as a "DN").
driverName	The printer driver name.
driverVersion	The Version number of the printer driver.
location	The printer's location, such as office number.
managedBy	The distinguished name of the user that is assigned to manage this printer.
name	The display name of an attached printer.
physicalLocationObject	Used to map a printer to a physical location.
portName	List of port names. For example, printer ports or Comm ports.
printCollate	True if a printer has collating bins.
printColor	True if a printer can print in color.
printDuplexSupported	Indicates the type of duplex support a printer has.
printerName	The display name of an attached printer.
printMACAddress	The MAC address.
printMaxCopies	The maximum number of copies a device can print.
printMaxResolutionSupported	The maximum printer resolution.
printMediaReady	A list of available media or paper for a printer.
printMediaSupported	A list of media supported by a printer.
printMemory	The amount of memory installed in a printer.
printNetworkAddress	The network address of the printer.
printNotify	A user-supplied string specifying the notification contact.
printOrientationsSupported	The page rotation for landscape printing.
printOwner	A user-supplied owner string.
printPagesPerMinute	Driver-supplied print rate in pages per minute.
printRate	Driver-supplied print rate.
printSharename	The printer's share name.
printSpooling	The type of printer spooling.
printStaplingSupported	True if the printer supports stapling. Supplied by driver.
printStatus	Status from the print spooler.
priority	The current priority of a print job.
serverName	The name of the server the printer is attached to or the print server name.
shortServerName	Pre-Windows 2000 compatible server name for print servers.
uNCName	The universal naming convention name for shared volumes and printers.

Shared Folders (Volume) Table

Property Name	Description
CommonName	The name that represents the shared folder object. Used to perform searches.
contentIndexingAllowed	Indicates whether or not the Shared Folder can be content indexed.
distinguishedName	The full path to the object, including the object name and all parent objects to the root of the domain, the distinguished name uniquely and unambiguously identifies an object within a domain hierarchy(also known as a "DN").
keywords	A list of keywords that can be used to locate a given connection point.
lastContentIndexed	The last time this Shared Folder was indexed.
managedBy	The distinguished name of the user that is assigned to manage this Shared Folder.
name	The name that represents an object. Used to perform searches. Same as Common Name.
uNCName	The universal naming convention name for shared folders.

User Properties Table

Property Name	Description
AbrevCountry	The country in the user's address. The country is represented as the 2-character country code
City	The town or city in the user's address.
CommonName	The name that represents an object. Used to perform searches.
company	The user's company name.
Country	The country in which the user is located.
countryCode	Specifies the country code for the user's language of choice. This value is not used by Windows 2000.
department	Contains the name for the department in which the user works.
description	The text description of the user.
displayName	The name displayed in the address book for a particular user. This is usually the combination of the users first name, middle initial, and last name.
distinguishedName	The full path to the object, including the object name and all parent objects to the root of the domain. The distinguished name uniquely and unambiguously identifies an object within a domain hierarchy(also known as a "DN").
facsimileTelephoneNumber	The fax number of the user.
givenName	The first name of the user.
homeDirectory	The user's home directory.
homeDrive	Specifies the drive letter mapped to the UNC path specified by homeDirectory.
homePhone	The user's main home phone number.
info	Notes or comments on the user's account.

User Properties Table Cont'd

Property Name	Description
initials	Contains the initials for parts of the user's full name. This may be used as the middle initial in the Windows Address Book.
ipPhone	The TCP/IP address for the phone. Used by Telephony.
logonCount	The number of successful times the user tried to log on to this account.
mail	The user's e-mail address.
manager	The manager of the user.
memberOf	The distinguished names of all the groups to which this user belongs.
mobile	The primary cell phone number of the user.
name	The name that represents the user. Same as Common Name.
otherFacsimileTelephoneNumber	Other fax numbers of the user.
otherHomePhone	A list of alternate home phone numbers.
otherIpPhone	The list of alternate TCP/IP addresses for the phone. Used by Telephony.
otherMobile	Other mobile telephone numbers of the user.
otherPager	Other pager numbers of the user.
otherTelephone	Other telephone numbers of the user.
pager	Pager number of the user.
physicalDeliveryOfficeName	Contains the office location in the user's place of business.
postalCode	Postal Code in the user's address.
postOfficeBox	Post Office Box number in the user's address.
profilePath	The path to the user profile.
sAMAccountName	The logon name used to support clients and servers from a previous version of Windows (such as Windows NT 4.0 and earlier, Windows 95, Windows 98, and LAN Manager).
scriptPath	The path of the user's logon script, .CMD, .EXE, or .BAT file. The string can be null.
State-Province	State or province in the user's address.
streetAddress	Street address in the user's address.
Surname	The user's last name.
telephoneNumber	Primary telephone number, usually work related, associated with the user.
title	Contains the user's job title. This property is commonly used to indicate the formal job title.
url	The URLs for the user's alternate web pages.
userPrincipalName	The UPN is an Internet-style login name for the user based on Internet standards. The UPN is shorter than the distinguished name and easier to remember. By convention, this should map to the user's e-mail name.
wwwHomePage	Contains the URL for the user's primary web page.