

# LDAP Filter Syntax

This topic deals with the syntax and rules for an LDAP filter, which is a normal string which expresses the criteria for the filter.

## Basic LDAP Filter Syntax and Operators

LDAP filters consist of one or more criteria. If one than more criterion exist in one filter definition, they can be concatenated by logical **AND** or **OR** operators. The logical operators are always placed in front of the operands (i.e. the criteria). This is the so-called 'Polish Notation'.

The search criteria have to be put in parentheses and then the whole term has to be bracketed one more time.

### AND Operation:

(& (...K1...) (...K2...)) or with more than two criteria: (& (...K1...) (...K2...) (...K3...) (...K4...))

### OR Operation:

(| (...K1...) (...K2...)) or with more than two criteria: (| (...K1...) (...K2...) (...K3...) (...K4...))

### Nested Operation:

Every AND/OR operation can also be understood as a single criterion:

(((& (...K1...) (...K2...))(& (...K3...) (...K4...)))) means: (K1 AND K2) OR (K3 AND K4)

The search criteria consist of a requirement for an LDAP attribute, e.g. (givenName=Sandra). Following rules should be considered:

<b>Equality:</b>	( <i>attribute</i> =abc) , e.g. (&(objectclass=user)(displayName=Foeckeler)
<b>Negation:</b>	(!( <i>attribute</i> =abc)) , e.g. (!objectClass=group)
<b>Presence:</b>	( <i>attribute</i> =*) , e.g. (mailNickName=*)
<b>Absence:</b>	(!( <i>attribute</i> =*)) , e.g. (!proxyAddresses=*)
<b>Greater than:</b>	( <i>attribute</i> >=abc) , e.g. (mdbStorageQuota>=100000)
<b>Less than:</b>	( <i>attribute</i> <=abc) , e.g. (mdbStorageQuota<=100000)

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**Proximity:** *(attribute~=abc)* , e.g. *(displayName~=Foeckeler)* **Caution: ~= is treated as = in ADS environments !!**

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**Wildcards** e.g. *(sn=F\*)* or *(mail=\*@cerrotorre.de)* or *(givenName=\*Paul\*)*  
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