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**LDAP Absolute True and False Filters**  
**[<draft-zeilenga-ldap-t-f-10.txt>](#)**

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## Abstract

This document extends the Lightweight Directory Access Protocol (LDAP) to support absolute True and False filters based upon similar capabilities found in X.500 directory systems. The document also extends the String Representation of LDAP Search Filters to support these filters.

## 1. Background

The X.500 Directory Access Protocol (DAP) [[X.511](#)] supports absolute True and False assertions. An 'and' filter with zero elements always evaluates to True. An 'or' filter with zero elements always evaluates to False. These filters are commonly used when requesting DSA-specific Entries (DSEs) which do not necessarily have 'objectClass' attributes. That is, where "(objectClass=\*)" may evaluate to False.

While LDAPv2 [[RFC1777](#)][RFC3494] placed no restriction on the number of elements in 'and' and 'or' filter sets, the LDAPv2 string representation [[RFC1960](#)][RFC3494] could not represent empty 'and' and 'or' filter sets. Due to this, absolute True or False filters were (unfortunately) eliminated from LDAPv3 [[Roadmap](#)].

This document extends LDAPv3 to support absolute True and False assertions by allowing empty 'and' and 'or' in Search filters [[Protocol](#)] and extends the filter string representation [[Filters](#)] to allow empty filter lists.

It is noted that certain search operations, such as those used to retrieve subschema information [[Models](#)], require use of particular filters. This document does not change these requirements.

This feature is intended to allow a more direct mapping between DAP and LDAP (as needed to implement DAP-to-LDAP gateways).

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [BCP 14](#) [[RFC2119](#)].

## 2. Absolute True and False Filters

Implementations of this extension SHALL allow 'and' and 'or' choices with zero filter elements.

An 'and' filter consisting of an empty set of filters SHALL evaluate to True. This filter is represented by the string "(&)".



An 'or' filter consisting of an empty set of filters SHALL evaluate to False. This filter is represented by the string "(|)".

Servers supporting this feature SHOULD publish the Object Identifier 1.3.6.1.4.1.4203.1.5.3 as a value of the 'supportedFeatures' [[RFC3674](#)] attribute in the root DSE.

Clients supporting this feature SHOULD NOT use the feature unless they have knowledge the server supports it.

### **3. Security Considerations**

The (re)introduction of absolute True and False filters is not believed to raise any new security considerations.

Implementors of this (or any) LDAPv3 extension should be familiar with general LDAPv3 security considerations [[Roadmap](#)].

### **4. IANA Considerations**

Registration of this feature is requested [[BCP64bis](#)].

Subject: Request for LDAP Protocol Mechanism Registration  
Object Identifier: 1.3.6.1.4.1.4203.1.5.3  
Description: True/False filters  
Person & email address to contact for further information:  
    Kurt Zeilenga <kurt@openldap.org>  
Usage: Feature  
Specification: RFC XXXX  
Author/Change Controller: IESG  
Comments: none

This OID was assigned [[ASSIGN](#)] by OpenLDAP Foundation, under its IANA-assigned private enterprise allocation [[PRIVATE](#)], for use in this specification.

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### **6. References**



[[Note to the RFC Editor: please replace the citation tags used in referencing Internet-Drafts with tags of the form RFCnnnn where possible.]]

### 6.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#) (also [RFC 2119](#)), March 1997.
- [Roadmap] Zeilenga, K. (editor), "LDAP: Technical Specification Road Map", [draft-ietf-ldapbis-roadmap-xx.txt](#), a work in progress.
- [Protocol] Sermersheim, J. (editor), "LDAP: The Protocol", [draft-ietf-ldapbis-protocol-xx.txt](#), a work in progress.
- [Models] Zeilenga, K. (editor), "LDAP: Directory Information Models", [draft-ietf-ldapbis-models-xx.txt](#), a work in progress.
- [Filters] Smith, M. (editor), LDAPbis WG, "LDAP: String Representation of Search Filters", [draft-ietf-ldapbis-filter-xx.txt](#), a work in progress.
- [Features] Zeilenga, K., "Feature Discovery in LDAP", [RFC 3674](#), December 2003.

### 6.2. Informative References

- [RFC1777] Yeong, W., Howes, T., and S. Kille, "Lightweight Directory Access Protocol", [RFC 1777](#), March 1995.
- [RFC1960] Howes, T., "A String Representation of LDAP Search Filters", [RFC 1960](#), June 1996.
- [BCP64bis] Zeilenga, K., "IANA Considerations for LDAP", [draft-ietf-ldapbis-bcp64-xx.txt](#), a work in progress.
- [RFC3494] Zeilenga, K., "Lightweight Directory Access Protocol version 2 (LDAPv2) to Historic Status", [RFC 3494](#), March 2003.
- [X.500] International Telecommunication Union - Telecommunication Standardization Sector, "The Directory -- Overview of concepts, models and services," X.500(1993) (also ISO/IEC 9594-1:1994).



- [X.501] International Telecommunication Union -  
Telecommunication Standardization Sector, "The Directory  
-- Models," X.501(1993) (also ISO/IEC 9594-2:1994).
- [X.511] International Telecommunication Union -  
Telecommunication Standardization Sector, "The  
Directory: Abstract Service Definition", X.511(1993)  
(also ISO/IEC 9594-3:1993).
- [ASSIGN] OpenLDAP Foundation, "OpenLDAP OID Delegations",  
<http://www.openldap.org/foundation/oid-delegate.txt>.
- [PRIVATE] IANA, "Private Enterprise Numbers",  
<http://www.iana.org/assignments/enterprise-numbers>.

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