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Rocky Enterprise Linux 9.2 Manual Pages on command 'ldap.conf.5'

\$ man ldap.conf.5

LDAP.CONF(5) File Formats Manual LDAP.CONF(5)

NAME

ldap.conf, .ldaprc - LDAP configuration file/environment variables

SYNOPSIS

/etc/ldap/ldap.conf, ldaprc, .ldaprc, \$LDAP<option-name>

DESCRIPTION

If the environment variable LDAPNOINIT is defined, all defaulting is disabled.

The ldap.conf configuration file is used to set system-wide defaults to be applied when running ldap clients.

Users may create an optional configuration file, ldaprc or .ldaprc, in their home directory which will be used to override the system-wide defaults file. The file ldaprc in the current working directory is also used.

Additional configuration files can be specified using the LDAPCONF and LDAPRC environment variables. LDAPCONF may be set to the path of a configuration file. This path can be absolute or relative to the current working directory. The LDAPRC, if defined, should be the basename of a file in the current working directory or in the user's home directory.

Environmental variables may also be used to augment the file based defaults. The name of the variable is the option name with an added prefix of LDAP. For example, to define BASE via the environment, set the variable LDAPBASE to the desired value.

Some options are user-only. Such options are ignored if present in the ldap.conf (or file specified by LDAPCONF).

Thus the following files and variables are read, in order:

variable \$LDAPNOINIT, and if that is not set:

system file /etc/ldap/ldap.conf,
user files \$HOME/ldaprc, \$HOME/.ldaprc, ./ldaprc,
system file \$LDAPCONF,
user files \$HOME/\$LDAPRC, \$HOME/.\$LDAPRC, ./\$LDAPRC,
variables \$LDAP<uppercase option name>.

Settings late in the list override earlier ones.

SYNTAX

The configuration options are case-insensitive; their value, on a case by case basis, may be case-sensitive.

Blank lines are ignored.

Lines beginning with a hash mark (`#') are comments, and ignored.

Valid lines are made of an option's name (a sequence of non-blanks, conventionally written in uppercase, although not required), followed by a value. The value starts with the first non-blank character after the option's name, and terminates at the end of the line, or at the last sequence of blanks before the end of the line. The tokenization of the value, if any, is delegated to the handler(s) for that option, if any. Quoting values that contain blanks may be incorrect, as the quotes would become part of the value. For example,

Wrong - erroneous quotes:

URI "ldap:// ldaps://"

Right - space-separated list of URIs, without quotes:

URI ldap:// ldaps://

Right - DN syntax needs quoting for Example, Inc:

BASE ou=IT staff,o="Example, Inc",c=US

or:

BASE ou=IT staff,o=Example\2C Inc,c=US

Wrong - comment on same line as option:

DEREF never # Never follow aliases

A line cannot be longer than LINE_MAX, which should be more than 2000 bytes on all platforms. There is no mechanism to split a long line on multiple lines, either for beautification or to overcome the above limit.

OPTIONS

The different configuration options are:

URI <ldap[si]://[name[:port]] ...>

Specifies the URI(s) of an LDAP server(s) to which the LDAP library should connect.

The URI scheme may be any of ldap, ldaps or ldapi, which refer to LDAP over TCP, LDAP over SSL (TLS) and LDAP over IPC (UNIX domain sockets), respectively. Each server's name can be specified as a domain-style name or an IP address literal. Optionally, the server's name can be followed by a ':' and the port number the LDAP server is listening on. If no port number is provided, the default port for the scheme is used (389 for ldap://, 636 for ldaps://). For LDAP over IPC, name is the name of the socket, and no port is required, nor allowed; note that directory separators must be URL-encoded, like any other characters that are special to URLs; so the socket

/usr/local/var/ldapi

must be specified as

ldapi://%2Fusr%2Flocal%2Fvar%2Fldapi

A space separated list of URIs may be provided.

BASE <base>

Specifies the default base DN to use when performing ldap operations. The base must be specified as a Distinguished Name in LDAP format.

BINDDN <dn>

Specifies the default bind DN to use when performing ldap operations. The bind DN must be specified as a Distinguished Name in LDAP format. This is a user-only operation.

DEREF <when>

Specifies how alias dereferencing is done when performing a search. The <when> can be specified as one of the following keywords:

never Aliases are never dereferenced. This is the default.

searching

Aliases are dereferenced in subordinates of the base object, but not in locating the base object of the search.

finding

Aliases are only dereferenced when locating the base object of the search.

always Aliases are dereferenced both in searching and in locating the base object of the search.

HOST <name[:port] ...>

Specifies the name(s) of an LDAP server(s) to which the LDAP library should connect. Each server's name can be specified as a domain-style name or an IP address and optionally followed by a ':' and the port number the ldap server is listening on. A space separated list of hosts may be provided. HOST is deprecated in favor of URI.

KEEPALIVE_IDLE

Sets/gets the number of seconds a connection needs to remain idle before TCP starts sending keepalive probes. Linux only.

KEEPALIVE_PROBES

Sets/gets the maximum number of keepalive probes TCP should send before dropping the connection. Linux only.

KEEPALIVE_INTERVAL

Sets/gets the interval in seconds between individual keepalive probes. Linux only.

NETWORK_TIMEOUT <integer>

Specifies the timeout (in seconds) after which the poll(2)/select(2) following a connect(2) returns in case of no activity.

PORT <port>

Specifies the default port used when connecting to LDAP servers(s). The port may be specified as a number. PORT is deprecated in favor of URI.

REFERRALS <on/true/yes/off/false/no>

Specifies if the client should automatically follow referrals returned by LDAP servers. The default is on. Note that the command line tools ldapsearch(1) &co always override this option.

SIZELIMIT <integer>

Specifies a size limit (number of entries) to use when performing searches. The number should be a non-negative integer. SIZELIMIT of zero (0) specifies a request for unlimited search size. Please note that the server may still apply any server-side limit on the amount of entries that can be returned by a search operation.

SOCKET_BIND_ADDRESSES <IP>

Specifies the source bind IP to be used for connecting to target LDAP server. Multiple IP addresses must be space separated. Only one valid IPv4 address and/or one valid IPv6 address are allowed in the list.

TIMELIMIT <integer>

Specifies a time limit (in seconds) to use when performing searches. The number should be a non-negative integer. TIMELIMIT of zero (0) specifies unlimited search time to be used. Please note that the server may still apply any server-side limit on the duration of a search operation.

VERSION {2|3}

Specifies what version of the LDAP protocol should be used.

TIMEOUT <integer>

Specifies a timeout (in seconds) after which calls to synchronous LDAP APIs will abort if no response is received. Also used for any ldap_result(3) calls where a NULL timeout parameter is supplied.

SASL OPTIONS

If OpenLDAP is built with Simple Authentication and Security Layer support, there are more options you can specify.

SASL_MECH <mechanism>

Specifies the SASL mechanism to use.

SASL_REALM <realm>

Specifies the SASL realm.

SASL_AUTHCID <authcid>

Specifies the authentication identity. This is a user-only option.

SASL_AUTHZID <authcid>

Specifies the proxy authorization identity. This is a user-only option.

SASL_SECPROPS <properties>

Specifies Cyrus SASL security properties. The <properties> can be specified as a comma-separated list of the following:

none (without any other properties) causes the properties defaults ("noanonym?mous,noplain") to be cleared.

noplain

disables mechanisms susceptible to simple passive attacks.

noactive

disables mechanisms susceptible to active attacks.

nodict disables mechanisms susceptible to passive dictionary attacks.

noanonymous

disables mechanisms which support anonymous login.

forwardsec

requires forward secrecy between sessions.

passcred

requires mechanisms which pass client credentials (and allows mechanisms which can pass credentials to do so).

minssf=<factor>

specifies the minimum acceptable security strength factor as an integer approximate to effective key length used for encryption. 0 (zero) implies no protection, 1 implies integrity protection only, 128 allows RC4, Blowfish and other similar ciphers, 256 will require modern ciphers. The default is 0.

maxssf=<factor>

specifies the maximum acceptable security strength factor as an integer (see minssf description). The default is INT_MAX.

maxbufsize=<factor>

specifies the maximum security layer receive buffer size allowed. 0 disables security layers. The default is 65536.

SASL_NOCANON <on/true/yes/off/false/no>

Do not perform reverse DNS lookups to canonicalize SASL host names. The default is off.

SASL_CBINDING <none/tls-unique/tls-endpoint>

The channel-binding type to use, see also LDAP_OPT_X_SASL_CBINDING. The default is none.

GSSAPI OPTIONS

If OpenLDAP is built with Generic Security Services Application Programming Interface support, there are more options you can specify.

GSSAPI_SIGN <on/true/yes/off/false/no>

Specifies if GSSAPI signing (GSS_C_INTEG_FLAG) should be used. The default is off.

GSSAPI_ENCRYPT <on/true/yes/off/false/no>

Specifies if GSSAPI encryption (GSS_C_INTEG_FLAG and GSS_C_CONF_FLAG) should be used. The default is off.

GSSAPI_ALLOW_REMOTE_PRINCIPAL <on/true/yes/off/false/no>

Specifies if GSSAPI based authentication should try to form the target principal name out of the ldapServiceName or dnsHostName attribute of the targets RootDSE entry. The default is off.

TLS OPTIONS

If OpenLDAP is built with Transport Layer Security support, there are more options you can specify. These options are used when an ldaps:// URI is selected (by default or otherwise) or when the application negotiates TLS by issuing the LDAP StartTLS operation.

TLS_CACERT <filename>

Specifies the file that contains certificates for all of the Certificate Authorities the client will recognize.

TLS_CACERTDIR <path>

Specifies the path of a directory that contains Certificate Authority certificates in separate individual files. The TLS_CACERT is always used before TLS_CACERTDIR.

TLS_CERT <filename>

Specifies the file that contains the client certificate. This is a user-only option.

TLS_ECNAME <name>

Specify the name of the curve(s) to use for Elliptic curve Diffie-Hellman ephemeral key exchange. This option is only used for OpenSSL. This option is not used with GnuTLS; the curves may be chosen in the GnuTLS ciphersuite specification.

TLS_KEY <filename>

Specifies the file that contains the private key that matches the certificate stored in the TLS_CERT file. Currently, the private key must not be protected with a password, so it is of critical importance that the key file is protected carefully. This is a user-only option.

TLS_CIPHER_SUITE <cipher-suite-spec>

Specifies acceptable cipher suite and preference order. <cipher-suite-spec> should be a cipher specification for the TLS library in use (OpenSSL or GnuTLS). Example:

OpenSSL:

TLS_CIPHER_SUITE HIGH:MEDIUM:+SSLv2

GnuTLS:

TLS_CIPHER_SUITE SECURE256:!AES-128-CBC

To check what ciphers a given spec selects in OpenSSL, use:

```
openssl ciphers -v <cipher-suite-spec>
```

With GnuTLS the available specs can be found in the manual page of gnutls-cli(1) (see the description of the option --priority).

In older versions of GnuTLS, where gnutls-cli does not support the option --priority, you can obtain the more limited list of ciphers by calling:

```
gnutls-cli -l
```

TLS_PROTOCOL_MIN <major>[.<minor>]

Specifies minimum SSL/TLS protocol version that will be negotiated. If the server doesn't support at least that version, the SSL handshake will fail. To require TLS 1.x or higher, set this option to 3.(x+1), e.g.,

```
TLS_PROTOCOL_MIN 3.2
```

would require TLS 1.1. Specifying a minimum that is higher than that supported by the OpenLDAP implementation will result in it requiring the highest level that it does support. This parameter is ignored with GnuTLS. On Debian openldap is linked against GnuTLS.

TLS_RANDFILE <filename>

Specifies the file to obtain random bits from when /dev/[u]random is not available.

Generally set to the name of the EGD/PRNGD socket. The environment variable RAND?

FILE can also be used to specify the filename. This parameter is ignored with

GnuTLS. On Debian openldap is linked against GnuTLS.

TLS_REQCERT <level>

Specifies what checks to perform on server certificates in a TLS session. The

<level> can be specified as one of the following keywords:

never The client will not request or check any server certificate.

allow The server certificate is requested. If a bad certificate is provided, it will be ignored and the session proceeds normally.

try The server certificate is requested. If a bad certificate is provided, the session is immediately terminated.

demand | hard

These keywords are equivalent and the same as try. This is the default setting.

TLS_REQSAN <level>

Specifies what checks to perform on the subjectAlternativeName (SAN) extensions in

a server certificate when validating the certificate name against the specified hostname of the server. The <level> can be specified as one of the following keywords:

never The client will not check any SAN in the certificate.

allow The SAN is checked against the specified hostname. If a SAN is present but none match the specified hostname, the SANs are ignored and the usual check against the certificate DN is used. This is the default setting.

try The SAN is checked against the specified hostname. If no SAN is present in the server certificate, the usual check against the certificate DN is used.

If a SAN is present but doesn't match the specified hostname, the session is immediately terminated. This setting may be preferred when a mix of certs with and without SANs are in use.

demand | hard

These keywords are equivalent. The SAN is checked against the specified hostname. If no SAN is present in the server certificate, or no SANs match, the session is immediately terminated. This setting should be used when only certificates with SANs are in use.

TLS_CRLCHECK <level>

Specifies if the Certificate Revocation List (CRL) of the CA should be used to verify if the server certificates have not been revoked. This requires TLS_CACERTDIR parameter to be set. This parameter is ignored with GnuTLS. On Debian openldap is linked against GnuTLS. <level> can be specified as one of the following keywords:

none No CRL checks are performed

peer Check the CRL of the peer certificate

all Check the CRL for a whole certificate chain

TLS_CRLFILE <filename>

Specifies the file containing a Certificate Revocation List to be used to verify if the server certificates have not been revoked. This parameter is only supported with GnuTLS.

ENVIRONMENT VARIABLES

LDAPNOINIT

disable all defaulting

LDAPCONF

path of a configuration file

LDAPRC basename of ldaprc file in \$HOME or \$CWD

LDAP<option-name>

Set <option-name> as from ldap.conf

FILES

/etc/ldap/ldap.conf

system-wide ldap configuration file

\$HOME/ldaprc, \$HOME/.ldaprc

user ldap configuration file

\$CWD/ldaprc

local ldap configuration file

SEE ALSO

ldap(3), ldap_set_option(3), ldap_result(3), openssl(1), sasl(3)

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