VMS Software

OpenLDAP 2.5.15 for OpenVMS I64, Alpha, and x86-64

August 2023

```
VSI-AXPVMS-LDAP-V0205-15-1.PCSI
VSI-I64VMS-LDAP-V0205-15-1.PCSI
VSI-X86VMS-LDAP-V0205-15-1.PCSI
```

1.   Introduction

Thank you for your interest in this port of OpenLDAP to OpenVMS. The current release of OpenLDAP for OpenVMS is based on the OpenLDAP 2.5.15 distribution.

OpenLDAP is a free, open source implementation of the Lightweight Directory Access Protocol (LDAP) developed by the OpenLDAP Project (https://www.openldap.org/) and released under the OpenLDAP Public License.

This port of the OpenLDAP for OpenVMS includes all functionality provided by the open source release, including client and server components, utilities, tools, and sample clients. Additional information about OpenLDAP can be found at https://www.openldap.org/.

2.   Acknowledgements

VMS Software Inc. would like to acknowledge the work of the OpenLDAP core development team and all community members for their ongoing efforts in developing and supporting this software.

3.   What's new in this release

For a detailed description of the features and bug fixes included in this release, please read https://www.openldap.org/software/release/changes.html.

See also the file `SYS$HELP:LDAP0205-15-I64.RELEASE_NOTES` that is installed with this release.

SSL/TLS support is dynamically linked into OpenLDAP for OpenVMS and requires SSL3 3.0-9 or later to be installed.

4.   Requirements

The kit you are receiving has been compiled and built using the operating system and product versions listed below. While it is highly likely that you will have no problems installing and using the kit on systems running higher versions of the operating system or products listed, we cannot say for sure that you will be so lucky if your system is running older versions.

- VSI OpenVMS V8.4-2L1 or higher (Integrity, Alpha); VSI OpenVMS V9.2-1 or higher (x86-64)

- VMS842L1_RTL-V0600 or later update installed
- VSI TCP/IP, HPE TCP/IP Services for OpenVMS, or MultiNet TCP/IP
- VSI SSL3 V3.0-9 or later
- C compiler (required only if you intend to develop your own applications that use LDAP libraries)

In addition to the above requirements, it is recommended that the software is installed on an ODS-5-enabled file system.

5.   Recommended reading

Before using LDAP for OpenVMS, it is recommended that users read the documentation available at https://www.openldap.org/doc/ in order to better understand how to configure and manage the software.

6.   Installing the kit

The kit is provided as an OpenVMS PCSI kit (`VSI-AXPVMS-LDAP-V0205-15-1.PCSI`, `VSI-I64VMS-LDAP-V0205-15-1.PCSI`, or `VSI-X86VMS-LDAP-V0205-15-1.PCSI`, depending on hardware platform) that can be installed by a suitably privileged user using the following command:

```
$ PRODUCT INSTALL LDAP
```

The installation will then proceed as follows (output may differ slightly from that shown, depending on platform and other factors):

```
Performing product kit validation of signed kits ...

The following product has been selected:
    VSI I64VMS LDAP V2.5-15                Layered Product

Do you want to continue? [YES]

Configuration phase starting ...

You will be asked to choose options, if any, for each selected product
and for
any products that may be installed to satisfy software dependency
requirements.

Configuring VSI I64VMS LDAP V2.5-15: LDAP for OpenVMS I64 V2.5-15
(Based on Open
LDAP 2.5.15)

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    VSI Software Inc.

Do you want the defaults for all options? [YES]

    It is important to note that an additional manual step will then
be required

Do you want to review the options? [NO]
```

```
Execution phase starting ...

The following product will be installed to destination:
    VSI I64VMS LDAP V2.5-15
DISK$I64V842L1SYS:[VMS$COMMON.]

Portion done:
0%...10%...20%...30%...40%...50%...60%...70%...80%...90%...100%

The following product has been installed:
    VSI I64VMS LDAP V2.5-15                    Layered Product

%PCSI-I-IVPEXECUTE, executing test procedure for VSI I64VMS LDAP V2.5-
15 ...
%PCSI-I-IVPSUCCESS, test procedure completed successfully

VSI I64VMS LDAP V2.5-15: LDAP for OpenVMS I64 V2.5-15 (Based on
OpenLDAP 2.5.15)

    Insert the following lines in SYS$MANAGER:SYSTARTUP_VMS.COM:
        @SYS$STARTUP:LDAP$DEFINE_LOGICALS.COM
    Insert the following lines in SYS$MANAGER:SYSHUTDWN.COM:
        @SYS$STARTUP:LDAP$DEASSIGN_LOGICALS.COM

    Verify the LDAP configuration template files.

    Refer to SYS$HELP:LDAP0205-15-I64.RELEASE_NOTES for more
information.
```

6.1.   *Post-installation steps*

After the installation has successfully completed, include the commands displayed at the end of the installation procedure in SYSTARTUP_VMS.COM and SYSHUTDWN.COM to ensure that the logical names required in order for users to use the software are defined system-wide at start-up.

Other steps that may be performed (depending upon how the software is to be used) once the installation has completed are as follows:

- LDAP server start-up

  If you intend to run the LDAP server on OpenVMS then the command procedure SYS$STARTUP:LDAP$STARTUP.COM should be added to SYSTARTUP_VMS.COM to start the server process on system start-up and SYS$STARTUP:LDAP$SHUTDOWN.COM should be added to SYSHUTDWN.COM to ensure that the LDAP server is stopped in an orderly fashion upon system shutdown.

- Define symbols

  Foreign commands for various OpenLDAP utilities can be defined by running the command procedure SYS$STARTUP:LDAP$SETUP.COM. Administrators may wish to include this command procedure in their LOGIN.COM.

- Run the Installation Verification Procedure (IVP)

  The IVP is normally run when LDAP for OpenVMS is installed; however the IVP may be run at any time by executing the following command:

  $ @SYS$TEST:LDAP$IVP.COM

- Build the example program provided with the kit

  A simple example C program is provided in the directory pointed to by the logical name

`LDAP$EXAMPLES`. To compile and link this program enter the following commands:

```
$ SET DEFAULT LDAP$EXAMPLES
$ CC/INCLUDE=LDAP$ROOT:[INCLUDE] LDAP_EXAMPLE.C
$ LINK LDAP_EXAMPLE.OBJ,SYS$INPUT/OPT
LDAP$LIBLDAP_SHR32/SHARE
LDAP$LIBLBER_SHR32/SHARE
$
```

Note that the above commands compile and link the example application using 32-bit pointers. If you wish to build applications using 64-bit pointers then it is necessary to compile the code with `/POINTER_SIZE=64` and to link with the 64-bit versions of the OpenLDAP libraries, namely the shareable images pointed to by the logical names `LDAP$LIBLDAP_SHR` and `LDAP$LIBLBER_SHR`.

6.2.   Privileges and quotas

The privileges `TMPMBX`, `NETMBX`, `BYPASS`, `SYSPRV`, and `DETACH` are required in order to run the OpenLDAP start-up and shutdown scripts, and the LDAP server process (run as a detached process) will inherit the default privileges for the username under which it is started.

The LDAP server can require considerable resources in order to operate efficiently, depending on workload requirements. The following quotas should be adequate for most purposes; however resource usage should be carefully monitored, and quotas adjusted as necessary.

```
Maxjobs:         0  Fillm:        256  Bytlm:        128000
Maxacctjobs:     0  Shrfillm:       0  Pbytlm:            0
Maxdetach:       0  BIOlm:        150  JTquota:        4096
Prclm:          50  DIOlm:        150  WSdef:          4096
Prio:            4  ASTlm:        300  WSquo:          8192
Queprio:         4  TQElm:        100  WSextent:      16384
CPU:        (none)  Enqlm:       4000  Pgflquo:      256000
```

If the LDAP server is expected to support large numbers of concurrent clients then it may also be necessary to increase the `CHANNELCNT` system parameter (this parameter can usually be safely set to its maximum value of 65535).

7. What's missing?

The supplied kit for OpenVMS includes all functionality supported by version 2.5.15 of the open source OpenLDAP release.