

Compile Open Source

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OVERVIEW

This document records the details of how to compile, install, and patch the open source packages deployed in the VDOPS/Suse environment.

I originally wrote this document when our environment ran under Solaris 2.6 ... these packages didn't ship with Solaris. Since then, we've migrated to SuSE Linux, and most of these packages are bundled with the OS, so this document isn't as useful now. Still, when I want the latest and greatest version of something, this is where I go to record how I compile it.

In general, code can be compiled and installed using the following steps:

Acquire the source code, place it as follows: /home/username/whatever.tar.gz. Notice that most open source sites have a web site www.something.xyz as well as an ftp site, [ftp.something.xyz](ftp://something.xyz). As a command-line geek, I generally acquire open source programs directly from the ftp site.

```
cd /opt/vdops/src
tar xvfz /home/username/whatever.tar.gz
cd whatever
./configure
make
make install
```

Occasionally, a product may require customization before being compiled. This document identifies those twiddles. In addition, the order in which these packages are presented in this document is the order to be used if you are building the compile environment (df-compile).

You will need to fiddle with your LD_LIBRARY_PATH variable; I prefer to do this by adding "/opt/vdops/lib" somewhere in /etc/ld.so.conf or similar. This tells the compiler to check the "/opt/vdops" tree for libraries. [Many sites employ "/opt/local" instead of "/opt/vdops".] Also, make sure that "/opt/vdops/bin" occurs early in your path statement, for the same reason.

OUTLINE

Tips

Read the README and INSTALL files first. Look for caveats regarding Linux in general and your flavor of Linux in particular.

If I modify a product's {filename}, then I save the original as {filename}.ori first.

Packages can generally be uninstalled by typing "make uninstall".

I keep the original *.tar.gz files in /opt/vdops/archive.

Map

This table illustrates the dependencies amongst the packages described here. In general, trees need to be installed from the bottom-up. If nothing appears below a package, then that package does not depend on any other (open source) package.

Supporting Libraries

db	cyrus-sasl	gd	gdbm	gmp	gettext	glib	Gtk +	imap	libpng	libmcrypt	libpcap	pari	mhash	openldap	openssl	tcp_wrappers	zlib
		freetype		sed		freetype	glib		zlib					db	bc		
		jpeg															
		libpng															
		zlib															

Scripting Languages

PERL	PHP
db	apache
gdbm	db
CPAN	gettext
	gdbm
	imap
	libpng
	openldap
	libmcrypt
	mhash
	openssl

	zlib
--	------

PERL Scripts

PatchReport	NodeWatch	dhcp-status	MRTG	razor-agents	SpamAssassin	spamd	swatch	x.radius
libwww	Period	Time-modules	gd	Digest-Nilsimsa	HTML::Parser	Net-DNS	Time-Date	Expect
HTML-Parser	IPC-Shareable		net-snmp	Digest::SHA1	HTML::TagSet	Net-Ping	File-Tail	IO-Stty
HTML-Tagset			rrdtool	URI::Escape	razor-agents	razor-agents	Date-Calc	IO-Tty
Bit-Vector							Bit-Vector	
MD5								
MIME-64								
URI								

Class-Loader	Crypt-RC4	Net-SSH
Compress-Zlib	Crypt-RSA	Net-SSH-Perl
Convert-ASCII-Armour	Crypt-Random	Net-SSLeay.pm
Convert-ASN1	Crypt-TripleDES	Net-Telnet-Cisco
Convert-PEM	Data-Buffer	Net-Telnet
Crypt-Blowfish	Devel-CoreStack	Sort-Versions
Crypt-Blowfish_PP	Digest-BubbleBabble	String-CRC32
Crypt-CBC	Digest-HMAC	Test-Simple
Crypt-DES_EDE3	Digest-MD2	Test-Harness
Crypt-DES	Digest-MD5	Term-Shell
Crypt-DH	Digest-SHA1	TermReadKey
Crypt-DSA	IO-Socket-SSL	Tie-EncryptedHash
Crypt-Primes	Math-GMP	

One of these modules (I forget which) needs sed, and Math-Pari relies on pari.

Infrastructure Services

apache	bind	dhcp	kerberos	openldap	qpage	freeradius	samba	sendmail
php				cyrus-sasl	tcp_wrappers	openldap		db
				openssl				openssl

E-Mail Applications

imap	pine	pop	imp
openldap	openldap	poppasswd	openldap

openssl	openssl		openssl
			imap
			php
			horde
			turba

Security Services

openssh	rpcbind	xinetd
openssl	tcp_wrappers	
tcp_wrappers		
zlib		

Utilities

ethereal	lslk	lsof	nc	net-snmp	nmap	ntop
glib				openssl		gdbm
Gtk+						libpcap

FOUNDATION CODE

These packages provide support for the stuff we actually use – end-user applications and system daemons.

Supporting Libraries & Tools

These packages contain libraries or tools which other packages require.

NCFTP-3.20

Available from <http://www.ncftp.com>. Perl wants this.

```
cd /opt/vdops/src/ncftp-3.2.0
./configure --prefix=/opt/vdops
make
make install
```

FREETYPE-2.1.9

Available from <http://www.freetype.org>. GD wants this.

```
cd /opt/vdops/src/freetype-2.1.9
./configure --prefix=/opt/vdops
make
make install
```

GD-2.0.33

Available from <http://www.boutell.com/gd> Graphics drawing library used by MRTG.

```
cd /opt/vdops/src/gd-2.0.33
./configure --prefix=/opt/vdops
make
make install
```

GETTEXT-0.11.2

Available from <ftp.gnu.org/pub/gnu/gettext> PHP wants this.

```
cd /opt/vdops/src/gettext-0.11.2
./configure --program-prefix=g
make
make install
```

LIBPNG-1.2.8

Available from <http://www.libpng.com>. Library required by gd.

```
cd /opt/vdops/src/libpng-1.2.8
cp scripts/makefile.linux Makefile
```

Edit Makefile and replace “/usr/local” with “/opt/vdops”

```
make
make test
make install
```

MYSQL-MAX 3.23.48

Available from www.mysql.com. Notice the use of “gtar” to extract the tar ball.

```
cd /opt/vdops/src
gunzip -c /home/skendric/mysql* | gtar xvf -
cd /opt/vdops/src/mysql-max-3.23.48-sun-solaris2.8-sparc
./configure
make
make install
```

OPENLDAP-2.3.24

Available from ftp.openldap.org/pub/OpenLDAP/openldap-release.tgz Pine uses the ldap library from this package.

```
cd /opt/vdops/src/openldap-2.3.24
env \
  CPPFLAGS="-I/opt/vdops/BerkeleyDB.4.1/include" \
  LDFLAGS="-L/opt/vdops/BerkeleyDB.4.1/lib -L/opt/vdops/lib -R/opt/vdops/lib" \
  CC=gcc \
  ./configure --with-ldbm-api=berkeley
make depend
make
make test
make install
```

OPENSSL-0.9.8E

Available from <http://www.openssl.org>. Or [ftp://ftp.openssl.org/source](http://ftp.openssl.org/source). OpenLDAP, Pine, IMAP, likely others, want this.

```
cd /opt/vdops/src/openssl-0.9.8e
./config --prefix=/opt/vdops
make depend
make
make test
make install
```

POSTGRESQL 8.1.4

Available from <http://www.postgresql.org>.

```
./configure --prefix=/opt/vdops --with-perl --with-openssl --with-pam
gmake
gmake install
useradd -u 51 -g vdops -d /export/home/postgres -c "PostGRES User" postgres
chown postgres:vdops /export/home/postgres
mkdir /home/postgres/data
chown postgres /home/postgres/data
su - postgres
initdb -D /home/postgres/data -W
postmaster -D /home/postgres/data
createdb test
psql test
```

pgadmin3-1.02

Available from <http://www.pgadmin3.org>

```
cd /opt/vdops/pgadmin3-1.02
./configure --enable-static --enable-debug --prefix=/opt/vdops --with-wx=/opt/vdops
make
make install
```

RRDTOOL-1.2.19

Available from <http://www.rrdtool.org>.

```
cd /opt/vdops/src/rrd_tool-1.2.19
./configure --prefix=/opt/vdops/rrdtool
make
make install
```

WXWINDOWS-PGADMIN3-20031010-7

Available from <http://www.pgadmin.org/pgadmin3/download.php#source>

```
cd /opt/vdops/src/wxWindows
./configure --with-gtk --enable-gtk2 --enable-unicode --disable-shared --enable-debug
prefix=/opt/vdops
make
make install
cd contrib/src/stc
make
make install
cd ../xrc
make
make install
```

PERL

PERL 5.8.8

Available from <http://www.cpan.org>

```
cd /opt/vdops/src/perl-5.8.8
rm -f config.sh Policy.sh
./Configure -de -Uinstallusrbinperl -Dprefix=/opt/vdops -Dscriptdir=/opt/vdops/bin -Dusethreads
```

Or, on some 64 bit systems:

```
./Configure -de -Uinstallusrbinperl -Dprefix=/opt/vdops -Dscriptdir=/opt/vdops/bin -Dusethreads
-Dlibpth="/usr/local/lib64 /lib64 /usr/lib64"
```

```
make
make test
make install
cd /usr/include
/opt/vdops/bin/h2ph * sys/*
```

DB-4.4.20

Available from <http://www.sleepcat.com>

```
cd build_unix
../dist/configure --prefix=/opt/vdops
make
make install
```

DBD-Pg 1.43

Available from <http://www.cpan.org>

```
cd /opt/vdops/src/DBD-Pg-1.4.3
perl Makefile.PL DEFINE=-D_GNU_SOURCE
make
make test
make install
```

PHP-5.0.3

From www.php.net

```
cd /opt/vdops/src/php-5.0.3
./configure --with-pgsql=/opt/vdops --prefix=/opt/vdops --with-apxs2=/usr/sbin/apxs2
make
make install
```

INFRASTRUCTURE SERVICES

Alpha Paging

QPAGE-3.3

Available from www.qpage.org. This compilation procedure relies on tcp_wrapper support (/opt/vdops/lib/libwrap.a and /opt/vdops/include/tcpd.h). I modded config.input with the following lines.

```
QPAGE_CONFIG="/opt/vdops/etc/qpage/qpage.cf"  
SNPP_SERVER_FILE="/opt/vdops/etc/qpage/qpage.servers"  
DAEMON_USER="uucp"  
SENDMAIL_PATH=/usr/sbin/sendmail
```

See config.input.ori for the original.

I also modify srvrnpp.c as follows:

```
Original:    qpage_log(LOG_DEBUG, "processing the page queue");  
Mod:        /*    qpage_log(LOG_DEBUG, "processing the page queue"); */
```

```
cd /opt/vdops/src/qpage-3.3  
./configure --prefix=/opt/vdops  
make  
make install
```

Authentication

KRB5-1.1.1¹

Kerberos provides authentication & encryption for the CNS Unix and Cisco devices.

```
cd /opt/vdops/src/krb5-1.1.1  
./configure --with-ccopts=-i --without-krb4 --with-cc=gcc  
make  
make install
```

```
mkdir /opt/vdops/etc/krb5kdc
```

```
ln -s /opt/vdops/etc/krb5kdc /opt/vdops/var/krb5kdc
```

```
shell% kdb5_util create -r FHCRC.ORG -s  
database Master Password is: Cr@zyBERD
```

```
shell% kadmin.vdops  
kadmin.vdops: addprinc admin/admin@FHCRC.ORG  
password is: ^trick-150  
kadmin.vdops: ktadd -k /opt/vdops/var/krb5kdc/kadm5.keytab kadmin/admin kadminw  
kadmin.vdops: addprinc skendric/admin@FHCRC.ORG  
kadmin.vdops: addprinc -randkey host/lv-udb.fhcrc.org  
kadmin.vdops: addprinc -randkey host/df-home.fhcrc.org
```

¹ We do not currently deploy Kerberos; ignore this package.

OPENSLLP-1.0.10

Available from <http://www.openslp.org>. Mac OS clients use this to find printers, file servers, and similar resources..

```
cd /opt/vdops/src/openslp-1.0.10
./configure --bindir=/opt/vdops/bin --sbindir=/opt/vdops/sbin --libdir=/opt/vdops/lib --
includedir=/opt/vdops/include --sysconfdir=/opt/vdops/etc/openslp --
vdopsstatedir=/opt/vdops/etc/openslp/var --sharedstatedir=/opt/vdops/etc/openslp/com --disable-
slpv1
make
make install
```

WPA_SUPPLICANT 0.5.7

Available from http://hostap.epitest.fi/wpa_supplicant/

Edit Makefile, replacing “/usr/local/sbin” with “/opt/vdops/sbin” in two places

```
mkdir /opt/vdops/etc/wireless
cd /opt/vdops/src/wpa_supplicant-0.5.7
cp defconfig .config
make
make eapol_test
make install
cp wpa_supplicant.conf /opt/vdops/etc/wireless
```

As root: mkdir /var/run/wpa_supplicant

Ignore the following error:

```
cp: cannot stat `dynamic_eap_methods': No such file or directory
make: *** [install] Error 1
```

Copy wpa_supplicant.conf to /opt/vdops/etc/wireless

Mail Relay

SENDMAIL 8.12.9

Available from <ftp.sendmail.org/ucb/sendmail>

The Berkeley DB library must be installed before sendmail will compile.

See /opt/vdops/src/sendmail-8.12.9/devtools/Site/site.config.m4 for my particular choices. You want to create this file before compiling sendmail. Read ../devtools/README for instructions on creating this file.

Also, we move the smrsh config dir from /usr/adm/sm.bin to /opt/vdops/etc/smrsh by modding the smrsh source.

In ../smrsh/smrsh.c, make the following change:

```
Original:      # define CMDDIR          "/usr/adm/sm.bin"
Mod:           # define CMDDIR          "/opt/vdops/etc/smrsh"
```

Here is a copy of site.config.m4:

```
#      @(#)FHCRC Site-specific build file  v2.1          9-23-2001

# Use gcc instead of Sun's cc
define(`confCC', `gcc')dnl

# Move sendmail.cf to /opt/vdops/etc/sendmail
APPENDDEF(`confENVDEF', `-'
D_PATH_SENDMAILCF="\ /opt/vdops/etc/sendmail/sendmail.cf\"')dnl

# Include Berkeley db support
APPENDDEF(`confINCDIRS', ` -I/opt/vdops/BerkeleyDB.3.2/include')dnl
APPENDDEF(`confLIBDIRS', ` -L/opt/vdops/BerkeleyDB.3.2/lib')dnl
APPENDDEF(`confLIBS', ` -ldb')dnl

# Include NIS+ support for external database maps
# Don't bother with NIS or dbm support
define(`confMAPDEF', ` -DNISPLUS')dnl

# Install man pages in /opt/vdops
define(`confNROFF', ` /usr/bin/nroff -h')dnl
define(`confMANROOT', ` /opt/vdops/man/')dnl
define(`confMAN1', `man1')dnl
define(`confMAN5', `man5')dnl
define(`confMAN8', `man8')dnl
define(`confMANDOC', `')dnl
define(`confMANOWN', `root')dnl
define(`confMANGRP', `cnsadmin')dnl

# Look for binaries in /opt/vdops
define(`confEBINDIR', ` /opt/vdops/sbin')dnl
define(`confMBINDIR', ` /opt/vdops/sbin')dnl
define(`confSBINDIR', ` /opt/vdops/sbin')dnl
define(`confUBINDIR', ` /opt/vdops/bin')dnl

# Look for various files in /opt/vdops/etc/sendmail
define(`confHFDIR', ` /opt/vdops/etc/sendmail')dnl
define(`confSTDIR', ` /opt/vdops/etc/sendmail')dnl

# Make root and cnsadmin owner and group respectively of man pages
define(`confMANOWN', `root')dnl
define(`confMANGRP', `cnsadmin')dnl
```

Once you have site.config.m4 in place, you can compile sendmail.

```
cd /opt/vdops/src/sendmail-8.12.9
sh Build -c
sh Build install
cd editmap
sh Build install
cd ../makemap
sh Build install
cd ../smrsh
sh Build install
```

(Notice that “sh Build clean” wipes the binaries. Type “sh Build -c” if you want to wipe the binaries and re-read the ../devtools/Site/site.config.m4 file – this is not automatically done, even after a “../src/Build clean”.)

SPAMASSASSIN-2.60

www.spamassassin.org

SPAMASS-MILTER-0.20

<http://savannah.nongnu.org/projects/spamass-milt> (see also <http://www.milter.org>)

Radius

FREERADIUS-0.8.1

Available from www.freeradius.org

```
cd /opt/vdops/src/freeradius-1.8.1
./configure --prefix=/opt/vdops --with-logdir=/opt/vdops/etc/radius/log --with-
radacctdir=/opt/vdops/etc/radius/racct --with-raddbdir=/opt/vdops/etc/radius/raddb --with-snmp
make
make install
```

Web Environment.

APACHE 1.3.33

Available from www.apache.org

mod_ssl available from www.modssl.org

```
cd /opt/vdops/src/mod_ssl-2.8.8-1.3.33
./configure --with-apache=../apache_1.3.33
```

```
cd /opt/vdops/src/mod_perl-1.3.33
```

```
perl Makefile.PL APACHE_SRC=./apache_1.3.33/src DO_HTTPD=1 USE_APACI=1 EVERYTHING=1
APACI_ARGS='--prefix=/opt/vdops/apache --enable-module=most --enable-
shared=max'
```

```
cd /opt/vdops/src/apache-1.3.33
LIBS=-lpthread SSL_BASE=./openssl-0.9.6g ./configure --prefix=/opt/vdops/apache --enable-
module=most --enable-shared=max
make
make certificate
make install
```

APACHE 2.0.55

Available from <http://www.apache.org>

```
cd /opt/vdops/src/apache-2.0.55
./configure --prefix=/opt/vdops/apache --enable-mods-shared=all
make
make install
```

To create a mod_ssl certificate:

```
vishnu:/temp # openssl genrsa -des3 -out server.key 1024
[...]
vishnu:/temp # openssl rsa -in server.key -out server.pem
vishnu:/temp # mv server.pem server.key
vishnu:/temp # openssl req -new -key server.key -out server.csr
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [US]:
State or Province Name (full name) [Washington]:
Locality Name (eg, city) [Seattle]:
Organization Name (eg, company) [Fred Hutchinson Cancer Research Center]:
Organizational Unit Name (eg, section) [Information Technology]:
Common Name (eg, YOUR name) [vishnu.fhcr.org]:soma.fhcr.org
Email Address [skendric@fhcr.org]:

Please enter the following 'extra' attributes
to be sent with your certificate request
secret []:
An optional company name [FHCR]:
vishnu:/temp #
vishnu:/temp # openssl x509 -req -days 3650 -in server.csr -signkey server.key
-out server.crt
Signature ok
subject=/C=US/ST=Washington/L=Seattle/O=Fred Hutchinson Cancer Research Center/OU=Information
Technology/CN=soma.fhcr.org/emailAddress=skendric@fhcr.org
Getting Private key
vishnu:/temp # ls
. .. server.crt server.csr server.key
vishnu:/temp #
```

APACHE 2.2.3

```
cd /opt/vdops/src/httpd-2.2.3
./configure --prefix=/opt/vdops --enable-mods-shared=all --enable-modules=all --
sysconfdir=/etc/apache2 --enable-authnz-ldap --enable-isapi --enable-file-cache
--enable-cache --enable-disk-cache --enable-mem-cache --enable-ldap --enable-ssl
--enable-lib64 --with-ldap
```

See http://docs.sun.com/source/819-5536-10/7_SSL_Apache.html for a hack needed to fix one of the Makefiles – only relevant if you are compiling for a 64 bit architecture.

```
make
make install
```

GTOP-0.12

Available from <http://www.cpan.org>.

```
cd /opt/vdops/src/GTop-0.12
env GOP_LIB=/opt/gnome/lib GOP_INCLUDE=/opt/gnome/include/libgtop-2.0 perl Makefile.PL
make
make test
make install
```

MOD_PERL-2.0.2

Available from <http://perl.apache.org>

```
cd /opt/vdops/src/mod_perl-2.0.2
perl Makefile.PL MP_APXS=/opt/vdops/apache/bin/apxs
make
make test
make install
```

May need to make log directories (`mkdir /srv/www/logs /opt/vdops/logs`)

Load apache:

```
/opt/vdops/bin/apachectl -D ssl -k start
```

PHP-4.2.3

Available from www.php.net. This procedure creates a dynamic Apache module, which then provides IMP the platform it needs to create dynamic Web pages. Notice the massive dependencies in this product – lots of other stuff needs to be compiled and installed prior to compiling php.

```
cd /opt/vdops/src/php-4.2.3
./configure --with-apxs2=/opt/vdops/apache/bin/apxs --with-config-file-path=/opt/vdops/etc/php --
with-openssl=/opt/vdops/ssl --with-zlib --enable-bcmath --with-db3=/opt/vdops/BerkeleyDB.3.2 --
```

```
with-imap=/opt/vdops/src/imap-2001a --with-imap-ssl=/opt/vdops/ssl --with-ldap=/opt/vdops --with-  
mcrypt --with-mhash --with-gettext --with-mysql=/opt/vdops/mysql
```

```
make
```

```
make install
```

END-USER APPLICATIONS

E-mail Clients

IMP-3.0

See <http://www.geocities.com/oliversl/imp/> for a discussion.

Available from <http://www.horde.org/imp/>

PINE 4.64

Available from <ftp.cac.washington.edu/pine/pine4.64.tar.gz>

Modify ../pine/osdep/os-lnx.h as follows:

```
Original:      #define SYSTEM_PINERC          "/usr/vdops/lib/pine.conf"  
Original:      #define SYSTEM_PINERC_FIXED  "/usr/vdops/lib/pine.conf.fixed"  
Mod:           #define SYSTEM_PINERC          "/opt/vdops/etc/pine/pine.conf"  
Mod:           #define SYSTEM_PINERC_FIXED  "/opt/vdops/etc/pine/pine.conf.fixed"
```

SuSE

```
cd /opt/vdops/src/pine4.61  
ln -s ../openldap-2.2.5 ldap  
./build lsu  
cp bin/pico /opt/vdops/bin  
cp bin/pine /opt/vdops/bin
```

CentOs

```
cd /opt/vdops/src/pine4.61  
ln -s /usr/lib/evaluation-openldap ldap  
./build SSLDIR=/usr lrh  
cp bin/pico /opt/vdops/bin  
cp bin/pine /opt/vdops/bin
```

SUPPORT SERVICES

Network Management

MRTG-2.15.2

Available from <http://www.mrtg.org>

```
cd /opt/vdops/src/mrtg-2.15.2
./configure --prefix=/opt/vdops
make
make install
```

MRTG-RRD.CGI

Available from <http://www.fi.muni.cz/~kas/mrtg-rrd/>

NODEWATCH-2.X

Available from <http://www.skendric.com/nodewatch>

Just copy the script “nodewatch” to wherever you want to put it.

SWATCH-3.1.1

This is a real-time syslog watcher, running on pooh and notifying duty for various events. It requires the following PERL modules: Time::HiRes, Date::Calc, File::Tail, Time::Date. <http://sourceforge.net/projects/swatch/> for the Web page.

```
cd /opt/vdops/src/swatch-3.1.1
perl Makefile.PL
make
make test
cp swatch /opt/vdops/script2
```

NET-SNMP-5.4

Available from <http://sourceforge.net/projects/net-snmp/>

² Old changes, no longer needed:

```
Change the first line from “#!/usr/bin/perl” to “#!/opt/vdops/bin/perl”.
Change the following line from:
my \ $File = File::Tail->new(name=>\$Filename, tail=>1, interval=>1.0);
to:
my \ $File = File::Tail->new(name=>\$Filename, tail=>1, reset_tail=>0,
interval=>1.0);
```

SNMP utilities, mostly used by scripts in /home/netops/bin.

```
cd /opt/vdops/src/net-snmp-5.4
./configure --prefix=/opt/vdops --with-mibdirs="/opt/vdops/share/snmp/mibs" --with-persistent-
directory="/opt/vdops/etc/snmp" --with-sys-contact=root --with-sys-location=J4-300 --with-
logfile="/opt/vdops/var/log/net-snmp" --with-default-snmp-version="2" --with-out-transport="TCP"
--with-perl-modules --with-mib-modules="ucd_snmp/diskio ucd-snmp/lmSensors"
make
make install
```

SECURITY

UTILITIES

These utilities do not provide production services. However, I think they are useful and thus have included them on all boxes.

LSLK_1.28

Available from <ftp://vic.cc.purdue.edu/pub/tools/unix/lslk/lslk.tar.gz>. Identifies locked files.

```
cd /opt/vdops/src/lslk_1.28
./Configure linux
    Do you want to take inventory (y/n)? y
make
make install
cp lslk.8 /opt/vdops/man/man8
cp lslk /opt/vdops/sbin
```

LSOF_4.56_W

Available from <vic.cc.purdue.edu/pub/tools/unix/lsof/lsof.tar.gz>. Identifies open files.

```
cd /opt/vdops/src/lsof_4.56_W
./Configure linux
    Do you want to take inventory (y|n) [y]? y
    Do you want to customize (y|n) [y]? n
make
ginstall -m 2755 -g sys lsof /opt/vdops/bin
ginstall -m 444 lsof.8 /opt/vdops/man/man8
```

NESSUS-2.2.7

Available from www.nessus.org. Retrieve `nessus-libraries*`, `libnasl*`, `nessus-core*`, `nessus-plugins*`.

Remove any SuSE-installed copies of Nessus. YAST doesn't do it ... run /usr/sbin/nessus-uninstall ... then search for all file with "nessus" in it and delete any and all you find under /usr.

Make sure that /opt/vdops/bin and /opt/vdops/sbin are in path before continuing.

```
[add /opt/vdops/lib to /etc/ld.so.conf]
ldconfig
```

```
cd nessus-libraries
./configure --prefix=/opt/vdops
```

[This step must be performed as root.]

```
./uninstall-nessus
```

[Now you can go back to being a normal user]

```
make
make install
```

```
cd libnasl
./configure --prefix=/opt/vdops
make
make install
```

```
cd nessus-core
./configure --prefix=/opt/vdops
make
make install
```

```
cd nessus-plugins
./configure --prefix=/opt/vdops
make
```

[These steps must be performed as root]

```
make install
chown -R netops:vdops /opt/vdops/lib
mkdir /opt/vdops/lib/nessus/plugins/scanners
```

Configure:

Copy /opt/vdops/etc/nessus/* from somewhere.

/opt/vdops/sbin/nessus-update-plugins

Copy /etc/init.d/vdops-nessusd from somewhere.

```
cd /etc/init.d/rc3.d
```

```
ln -s ../vdops-nessusd K07vdops-nessusd
```

```
ln -s ../vdops-nessusd/S15vdops-nessusd
```

/opt/vdops/sbin/nessus-mkcert

/etc/init.d/vdops-nessusd start

NMAP-4.20

Available from <http://www.insecure.org>.

```
cd /opt/vdops/src/nmap-4.20
./configure --prefix=/opt/vdops
make
make install
```

NTOP-2.0

Available from <http://www.ntop.org> Analogous to “top” but for TCP/UDP connections. Change ntop/configure as follows:

Original:

```
test -r $GDBM_ROOT/libgdbm.a &&
```

New:

```
test -r $GDBM_ROOT/.libs/libgdbm.a &&
```

```
cd /opt/vdops/src/ntop-2.0
ln -s libpcap ../libpcap-0.4
cd ntop
./configure --enable-tcpwrap --with-pcap-root=/opt/vdops/src/libpcap-0.4 --with-openssl-root=/opt/vdops/ssl --with-gdbm-root=/opt/vdops/src/gdbm-1.8.0
make
make install
```

This isn't working. “make” doesn't look in /opt/vdops/lib for libraries ... not sure why not.