Daylight Installation Guide

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Daylight Installation Guide

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Copyright Notice

1. Basic Daylight Installation

1.1 New Installation - Solaris and Linux

The following set of instructions cover the steps required for a basic installation of toolkit and application software.

1.1.1 Obtain and Install Software

Daylight software is available for <u>download</u> as a platform-specific .tar.gz archive file from the website.

It is possible for any user to own the Daylight files as the Daylight administrator. However, it is highly recommended that one create a user named 'thor' as the owner. Please note that 'root' must NOT own the files as some of the software will not run as 'root'.

Although any directory on a partition with at least 100 MB free space can serve as the install directory, it is recommended that /usr/local/daylight be created for this purpose.

As user 'root':

- Create the group 'thor'.
- Create user 'thor' in group 'thor'.
- Create the directory '/usr/local/daylight'.
- Change the owner of the 'daylight' directory to 'thor' and make this the home directory for 'thor'.

As user 'thor':

- Go to /usr/local/daylight.
- Unpack the archive file to this location.

1.1.2 Configure System

The following environment variables need to be added to the initialization file (.login, .profile, etc.) for the user 'thor'.

- DY_HOME = Specifies location of the Daylight installation directory

- DY_ROOT = Specifies location of the Daylight version-specific directory in $DY_HOME
- PATH = Specifies the location of the Daylight executables
- MANPATH = Specifies location of Daylight manual pages
- DY_LICENSEDATA = Specifies location of Daylight license file
- LD_LIBRARY_PATH = Specifies location of library directories

Example for csh:

```
setenv DY_HOME /usr/local/daylight
setenv DY_ROOT $DY_HOME/v
setenv PATH $DY_ROOT/bin:$PATH
setenv MANPATH $DY_ROOT/man/:$MANPATH
setenv DY_LICENSEDATA $DY_HOME/dy_license.dat
setenv LD_LIBRARY_PATH $DY_ROOT/lib/:$LD_LIBRARY_PATH
```

Example for sh:

```
DY_HOME=/usr/local/daylight; export DY_HOME
DY_ROOT=$DY_HOME/v; export DY_ROOT
PATH=$DY_ROOT/bin/:$PATH; export PATH
MANPATH=$DY_ROOT/man/:$MANPATH; export MANPATH
DY_LICENSEDATA=$DY_HOME/dy_license.dat; export DY_LICENSEDATA
LD_LIBRARY_PATH=$DY_ROOT/lib/:$LD_LIBRARY_PATH; export LD_LIBRARY_PATH
```

Additional users can be added either by including the above environment variables in each user's initialization file or by creating a separate file with the information that can then be sourced from the user's initialization file.

1.1.3 Obtain and Install License

To obtain a license:

- Submit <u>site</u> information using the form on the website.
- If you are requesting an evaluation license, you will be sent an Evaluation Agreement by email. This Agreement must be signed and returned before you will be issued a license.
- Provide <u>CPU information</u> by sending the output of running `$DY_ROOT/bin/testlicense -i` using the form on the website.
- You will be sent a valid license by email.

To install a standard license:

- Copy the designated text in the license email to a file named 'dy_license.dat' or rename the license attachment to 'dy_license.dat'.
- Place the file in $DY_HOME or if using an alternative location set the DY_LICENSEDATA variable to this location
- Test the license by running `$DY_ROOT/bin/testlicense`.

See the <u>licensing manual page</u> for more advanced licensing schemes.

1.2 New Installation - Windows

The following instructions cover the steps required for a new toolkit installation. Note: The progob toolkit and program applications like clogp, convert and dayprop are not supported on <u>Windows</u>. See the Release Notes

for Windows included with the installation files for information on using the toolkits within the MS Visual Studio environment and with CYGWIN.

1.2.1 Obtain and Load Software

Daylight software is available for <u>download</u> as a self-extracting Windows WinZip file from the website.

To install:

- Double-click on the .exe file.
- Select unzip with the default exaction location of C:\daylight\v.

1.2.2 Obtain and Install License

To obtain a license:

- Submit <u>site</u> information using the form on the website.
- If you are requesting an evaluation license, you will be sent an Evaluation Agreement by email. This Agreement must be signed and returned before you will be issued a license.
- Provide <u>CPU information</u> by sending the output of running `C:\daylight\v\bin\testlicense.exe -i` from a DOS window using the form on the website.
- You will be sent a valid license by email.

To install a standard license:

- Copy the designated text in the license email to a file named 'dy_license.dat' or rename the license attachment to 'dy_license.dat'.
- Place the file in C:\daylight.
- Test the license by running `C:\daylight\v\bin\testlicense.exe`.

1.3 Update Installation - All Platforms

Once you have downloaded the software for the appropriate platform, follow the steps below to update to a new full version of Daylight software. Please note that you need a valid license with a 'support to' date later than the release date of the software version being installed. If updating using a patch, please see the directions supplied with the patch.

- For Solaris and Linux:
    - ♦ Unpack the archive file in DY_HOME, typically /usr/local/daylight.
    - ♦ Change the path for DY_ROOT for all of the users to that of the new installation.
    - ♦ Source the initialization file.
    - ♦ Test the license by running `$DY_ROOT/bin/testlicense`.
    - ♦ If using DayHTML, DayCGI, or DayHTTP, update the paths in the webserver configuration file and the dcgi_env.sh file (see <u>below</u>).
    - ♦ If using THOR-Merlin, stop and restart the servers (see <u>below</u>).

- For Windows:
    - ♦ Extract the zipped file.
    - ♦ Test the license by running `C:Daylight\v\bin\testlicense.exe`.

1.4 Optional Configurations - Solaris and Linux

The following sections describe how to configure specific optional features.

1.4.1 DayHTML, DayCGI, and HTTP Webserver

One must configure a webserver in order to run DayCGI/HTTP programs. In addition, this configuration is required if you wish to access the DayHTML documentation (User Manuals, Programmer's Guide, etc.) and the Contributed Code documentation (see New Contributed Code Installation locally from a webserver. The directions below assume that a webserver such as Apache is already installed. For additional DayCGI configuration information, see the DayCGI Manual.

As 'root' add the following, or the appropriate locations if different, to your http configuration file and then restart your server.

- For DayHTML and Contributed Code documentation access:
  ```
  Alias /dayhtml/     /usr/local/daylight/v/dayhtml/
  Alias /dayicon/     /usr/local/daylight/v/dayhtml/icons/
  Alias /daycontrib/    /usr/local/daylight/v/contrib/src/
  ```

- For DayCGI access:
  ```
  ScriptAlias /daycgi/   /usr/local/daylight/v/daycgi/
  ```

- For DayHTTP access:
  ```
  ScriptAlias /dayhttp/   /usr/local/daylight/v/dayhttp/
  <Directory "/usr/local/daylight/v/dayhttp/">
  SetEnv LD_LIBRARY_PATH /usr/local/daylight/v/lib
  SetEnv DY_LICENSEDATA /usr/local/daylight/dy_license.dat
  SetEnv DY_ROOT /usr/local/daylight/v
  Options Indexes MultiViews
  AllowOverride None
  Order allow,deny
  Allow from all
  ```

To access the DayHTML documents:

- Start a web browser.
- Go to the following URL --> http://host.domain/dayhtml/doc/index.html (where host.domain is the server's hostname).

To configure and test the DayCGI environment:

- Open $DY_ROOT/daycgi/dcgi_env.sh in a text editor.
- Delete the first section as indicated and edit the path for DY_ROOT.
- Go to the following URL --> http://host.domain/dayhtml/index.html

1.4.2 THOR and Merlin Server

The basic steps required for configuring the THOR-Merlin database system are described below. See the THOR-Merlin Administration Guide for more detailed information.

The following environment variables need to be added to the initialization file (.login, .profile, etc.) for the user 'thor'.

- DY_THORDB = Specifies location of the THOR 'home'
- DY_DATABASE_PATH = Specifies location of THOR database files
- DY_DATABASE_PASSWORDS_FILE = Specifies location of database password file
- DY_THOR_LOG = Specifies location of THOR log
- DY_MERLIN_LOG = Specifies location of Merlin log
- DY_MERLIN_MEMORY_LIMIT = Sets the memory limit for loading databases
- DY_MERLIN_MAX_CLIENTS = Sets the maximum number of Merlin clients
- DY_MERLIN_NPROCS = Sets the number of processors Merlin searches can utilize

Example for csh:

```
setenv DY_THORDB $DY_HOME/thordb
setenv DY_DATABASE_PATH $DY_THORDB
setenv DY_DATABASE_PASSWORDS_FILE $DY_ROOT/etc/dy_passwords.dat
setenv DY_THOR_LOG_FILE $DY_THORDB/thorserver.log
setenv DY_MERLIN_LOG_FILE $DY_THORDB/merlinserver.log
setenv DY_MERLIN_MEMORY_LIMIT 100000000
setenv DY_MERLIN_MAX_CLIENTS 4
setenv DY_MERLIN_NPROCS 1
```
Example for sh:

```
DY_THORDB=$DY_HOME/thordb; export DY_THORDB
DY_DATABASE_PATH=$DY_THORDB; export DY_DATABASE_PATH
DY_DATABASE_PASSWORDS_FILE=$DY_ROOT/etc/dy_passwords.dat; export
DY_DATABASE_PASSWORDS_FILE
DY_THOR_LOG_FILE=$DY_THORDB/thorserver.log; export DY_THOR_LOG_FILE
DY_MERLIN_LOG_FILE=$DY_THORDB/merlinserver.log; export DY_MERLIN_LOG_FILE
DY_MERLIN_MEMORY_LIMIT=100000000; export DY_MERLIN_MEMORY_LIMIT
DY_MERLIN_MAX_CLIENTS=4; export DY_MERLIN_MAX_CLIENTS
DY_MERLIN_NPROCS=1; export DY_MERLIN_NPROCS
```
Then complete the following steps:

- As 'root' go to /etc --- Note: if using NIS, this should be on the NIS master.
- Using a text editor add the following to the 'services' file:

```
thor    5555/tcp
merlin 5556/tcp
```
- At 'thor', start the server daemons. The executables are located at:
  $DY_ROOT/bin/thorserver and $DY_ROOT/bin/merlinserver
- Test the configuration by running XVTHOR or XVMerlin and open a demo database.
- Additional non-'thor' users can be added by running `sthorman` and updating their initialization files with definitions for DY_ROOT and DY_LICENSEDATA.

1.4.3 Customize System

Default values for many options such as color and font preference can be changed by editing the appropriate file in either $DY_ROOT/etc/unix or $DY_ROOT/etc/common. See the options manual page for more details.

1.5 Contributed Code - All Platforms

Daylight contributed code, also referred to as 'Contrib', is a collection of freely-distributed open source code. It is a place to find examples on how to use the Daylight Toolkits to accomplish your goals. To encourage contributions to Contrib, we emphasize the "unsupported" aspect of its contents. New users should begin by exploring the directories under $DY_ROOT/contrib. In addition, other <u>Contrib</u> programs not in the Daylight release can be accessed from the Daylight website.

- For Solaris and Linux:
  - ♦ Add $DY_ROOT/contrib/bin to PATH environment variable and $DY_ROOT/contrib/lib to LD_LIBRARY_PATH
  - ♦ If want to build 64-bit programs, add $DY_ROOT/contrib/bin64 to PATH and $DY_ROOT/contrib/lib64 to LD_LIBRARY_PATH
  - ♦ Go to $DY_ROOT/contrib/src.
  - ♦ Type `make install32` or `make install64` to build either the 32 or 64--bit files or type.
  - ♦ Type `make_index −html −link /daycontrib` to build the html documentation, if desired.
  - ♦ To test the installation type `echo 'SCOCC' | cansmi` --- the result should be CCOCS

- For Windows:
  - ♦ Note: Contrib code for Windows must be build within the <u>cygwin</u> environment using gcc as the compiler. Note: You need both the base and devel packages.
  - ♦ Make sure that the following minimal environment variables defined:

    ◊ DY_ROOT C:\daylight\v\
    ◊ LD_LIBRARY_PATH C:\daylight\v\lib;C:\daylight\v\contrib\lib
    ◊ PATH C:\daylight\v\bin;C:\daylight\v\contrib\bin

  - ♦ Change -L$(DY_ROOT)/lib to -L$(DY_ROOT)/bin in C:\daylight\v\contrib\src\machine_dependent\makefile_include.cygwin32.
  - ♦ In a cygwin window, go to $DY_ROOT/contrib/src.
  - ♦ Type `make install`.
  - ♦ To test the installation type `echo 'SCOCC' | cansmi` --- the result should be CCOCS

2. Daylight Wrappers

2.1 New Installation - Solaris and Linux

Complete the following steps to setup the Daylight licensed Wrappers:

- Complete the directions <u>above</u> for the Basic Daylight Installation (Sections 1.1.1 thorugh 1.1.3). Note: The license file must include a wrapper-specific license and licenses for each of the toolkits to be used.
- Download the platform-specific wrapper archive from the <u>download</u> site.
- As user 'thor' locate the copy the archive file to $DY_ROOT and unpack it.
- Add $DY_ROOT/wrappers/cpp/lib and $DY_ROOT/wrappers/java/lib to LD_LIBRARY_PATH environment variable.
- Add $DY_ROOT/wrappers/java/lib/libdt_java.jar to CLASSPATH.

- For 64-bit C-code, add $DY_ROOT/wrappers/cpp/lib64 to LD_LIBRARY_PATH

A set of java examples is included in $DY_ROOT/wrappers/java/examples.

- Add $DY_ROOT/wrappers/java/ to CLASSPATH.
- Go to $DY_ROOT/wrappers/java/.
- Type `javac examples/*.java`.
- To test type `echo 'SCOCC' | java examples/FmtSmiles` --- the result should be CCOCS

2.2 New Installation - Windows

Complete the following steps to setup the Daylight licensed Wrappers:

- Complete the directions <u>above</u> for the Basic Daylight Installation (Section 1.2).
  Note: The license file must include a wrapper-specific license and licenses for each of the toolkits to be used.
- Download the platform-specific wrapper archive from the <u>download</u> site.
- Install the wrappers by double-clicking on .exe file
- Select unzip with the default exaction location of C:\daylight\v.
- Add the following to your PATH environment variable: C:\daylight\v\wrappers\cpp\lib; C:\daylight\v\wrappers\java\lib
- Add the following to your CLASSPATH: C:\daylight\v\wrappers\java\lib\dt_java.jar

A set of java examples is included in C:\daylight\v\wrappers\java\examples.

- Add C:\daylight\v\wrappers\java to CLASSPATH.
- Go to C:\daylight\v\wrappers\java\.
- Type `javac examples/*.java`.
- To test type `echo SCOCC | java examples/FmtSmiles` --- the result should be CCOCS

2.3 Update Installation - All Platforms

After updating the Basic Daylight installation as described <u>above</u>, <u>download</u> the new wrapper file and either copy it to $DY_ROOT and unpack it (Solaris and Linux) double-click on the .exe file to unzip and install.

3. Daylight Web Services Installation

3.1 New Installation - Solaris and Linux

The following set of instructions assume that Java JDK 5, Tomcat 5.5 and Axis 1.4 are already installed. Note: Only 32-bit versions of the web services are currently available.

3.1.1 Obtain and Install Software and License

Follow directions <u>above</u> for the New Basic Installation - Solaris and Linux (Section 1.1.1 to Section 1.1.3) to obtain and install the Daylight software and license. Note: The license file must include a program license for each specific web service.

3.1.2 Software Configuration

Complete the following steps to setup the web services. Note: The user must have the appropriate level of priveliges in order to change/add files to the CATALINA_HOME and to start up Tomcat.

- Copy $DY_ROOT/webservices/dayws.war to $CATALINA_HOME/webapps
- If necessary, create a setenv.sh file in $CATALINA_HOME/bin
- Add the following environment variables: DY_HOME, DY_ROOT, LD_LIBRARY_PATH and DY_LICENSEDATA
  Example:
  DY_HOME=/usr/local/daylight; export DY_HOME
  DY_ROOT=$DY_HOME/v; export DY_ROOT
  DY_LICENSEDATA=$DY_HOME/dy_license.dat; export DY_LICENSEDATA
  LD_LIBRARY_PATH=$DY_ROOT/lib/:$LD_LIBRARY_PATH; export LD_LIBRARY_PATH
- Restart Tomcat
- Change the location of AXIS_HOME in $DY_ROOT/webservices/wstest/wstest.sh to point to the local axis directory
- Test the setup by running `$DY_ROOT/webservices/wstest/wstest.sh localhost:port` where port is the port number on which Tomcat is running.

3.2 Update Installation

Follow the directions above (Section 3) to update the basic installation, copy $DY_ROOT/webservices/dayws.war file to $CATALINA_HOME/webapps and restart Tomcat.

4. DayCart Installation

4.1 New Installation - Solaris and Linux

The following set of instructions are an overview of the installation procedures for the DayCart Oracle/PostgreSQL cartridges. The directions below assume that Oracle or PostgreSQL is already installed.

4.1.1 Obtain and Install Software

Follow directions above for Section 1.1.1 of the New Installation to obtain and install the Daylight software.

4.1.2 Obtain License

DayCart is licensed separately so you do not need a standard toolkit/application Daylight license (dy_license.dat) file to use the basic DayCart functions. To obtain a DayCart license follow first set of stepsabovefor Section 1.1.3 of the New Installation. Indicate you want a DayCart license for either Oracle or PostgreSQL. You will be issued a valid license (sql insert statement) by email.

4.1.3 Configuration - Oracle

Complete the following steps to setup the Oracle cartridge. The Oracle server contacts the network listener when it wants to run external procedures like the Daylight cartridge.

- As user 'thor' locate the directory 'dcischem' within $DY_ROOT.

- Edit the create.sql script to take out the indicated lines and change the 'c$dcischemlib' path to point to the appropriate cartridge shared object library, e.g., /usr/local/daylight/v/lib/ddlib.so.XX (where XX is the Oracle version).
- Log-on as an Oracle user with DBA privileges.
- Create the tablespace 'daylight_ts' with a size of 10M.
- Create the Oracle user 'c$dcischem' identified by 'secret' with DBA privileges and default 'daylight_ts' tablespace.
- Run the create.sql script as the 'c$dcischem' user.
- Check to see if the listener is running and functional (tnsping hostname), if not start it (lsnrctl start) and rerun the tnsping command.
- Configure the listener by editing the adding the line '(ENVS = "EXTPROC_DLLS=ANY")' after the line '(PROGRAM = extproc)' in the $ORACLE_HOME/network/admin/listener.ora file
- Stop and restart the listener (lsnrctl stop and lsnrctl start).
- Install the license by running the license key sql insert statement as the 'c$dcischem' user.
- See the SQL scripts in the $DY_ROOT/dcischem/TEST subdirectory for a set of verification scripts (run_tests) and examples of use of the cartridge.
- As an Oracle user with DBA privileges, revoke DBA privileges from user 'c$dcischem' and change the password.
- To allow users access to the cartridge, grant the 'daycart' role to non-privileged users.

4.1.4 Configuration - PostgreSQL

Complete the following steps to setup the PostgreSQL cartridge:

- Go to $DY_ROOT/pgcart/. Connect to the PostgreSQL database as the root user (typically postgres) and execute `\i create_pg_schema.sql`.
- Install the license using the sql statement that was sent to you.
- Exit the database and locate the default library location by running `pg_config --pkglibdir`. Copy the correct library version of libpgcart.so.XX (where XX is the PostgreSQL version) for your platform from $DY_ROOT/lib/ or $DY_ROOT/lib/ to the PostgreSQL location, simply named libpgcart.so.
- Log into the database as the root user and run `\i create_pg_functions.sql`.

4.1.5 Testing

The following simple queries can be run to test the cartridge:

- `select getinfo('daycart_version');` with the result of the daylight version installed
- `select testlicense('daycart');` with the result of '1'
- `select smi2cansmi('NCC', 0);` with the result of 'CCN'

4.2 New Installation - Windows

The following set of instructions are an overview of the installation procedures for the DayCart Oracle cartridge. The directions below assume that Oracle is already installed and running.

4.2.1 Obtain and Install Software

Follow directions above for the New Basic Installation - Windows (Sections 1.2.1 only) to obtain and install the Daylight software.

4.2.2 Obtain License

DayCart is licensed separately so you do not need a standard toolkit/application Daylight license (dy_license.dat) file to use the basic DayCart functions. To obtain a license follow steps 1 and 2 <u>above</u> for Section 1.2.2 of the New Installation requesting an Oracle cartridge license. You will be issued a valid license (sql insert statement) by email.

4.2.3 Configure System - Oracle

Complete the following steps to setup the Oracle cartridge. The Oracle server contacts the network listener when it wants to run external procedures like the Daylight cartridge.

- Locate the directory C:\daylight\v\dcischem.
- Edit the create.sql script to take out the indicated lines and change the 'c$dcischemlib' path to point to the appropriate cartridge shared object library, e.g., C:\daylight\v\bin\ddlib.XX.dll (where XX is the Oracle version).
- Log-on as an Oracle user with DBA privileges.
- Create the tablespace 'daylight_ts' with a size of 10M.
- Create the Oracle user 'c$dcischem' identified by 'secret' with DBA privileges and default 'daylight_ts' tablespace.
- Run the create.sql script as the 'c$dcischem' user.
- From a DOS window, check to see if the listener is running and functional (tnsping hostname), if not start it (lsnrctl start) and rerun the tnsping command.
- Configure the listener by editing the adding the line '(ENVS = "EXTPROC_DLLS=ANY")' after the line '(PROGRAM = extproc)' in the \oracle\product\XX\YY\NETWORK\ADMIN\listener.ora file where XX is the product version and YY is the server
- Stop and restart the listener (lsnrctl stop and lsnrctl start).
- Install the license by running the license key sql insert statement as the 'c$dcischem' user.
- See the SQL scripts in the C:\daylight\v\dcischem\TEST subdirectory for a set of verification scripts and examples of use of the cartridge. The scripts can be run as the c$dcischem user and the results compared with the output in the ref_out files.
- As an Oracle user with DBA privileges, revoke DBA privileges from user 'c$dcischem' and change the password.
- To allow users access to the cartridge, grant the 'daycart' role to non-privileged users.

4.2.4 Testing

The following simple queries can be run to test the cartridge:

- `select getinfo('daycart_version');` with the result of the daylight version installed
- `select testlicense('daycart');` with the result of '1'
- `select smi2cansmi('NCC', 0);` with the result of 'CCN'

4.3 Update Oracle Installation - All Platforms

Follow the steps below to update to a new full minor version of DayCart software See the <u>DayCart User Manual</u> for major version upgrades. If updating using a patch, please see the directions supplied with the patch. Please note that you will need a valid DayCart license.

- Follow directions <u>above</u> for the Update Basic Installation - All Platforms to update the Daylight software.

- Edit the create.sql script to remove the indicated lines and update the 'c$dcischemlib' path.
- Run the create.sql script as the 'c$dcischem' user.

5. FLEXnet Installation and Configuration

5.1 New FLEXnet Installation

Daylight supports the following features via Macrovision's FLEXnet Served License Component Model:

- License file "FEATURE" lines.
- Floating (non-node-locked) licenses.

All other FLEXnet license features (including three-server redundancy) are currently unsupported.

Daylight products available under FLEXnet licensing include the following:

- Toolkits
- Programs
- THOR and Merlin Servers
- THOR Databases

The following instructions describe a relatively basic installation and assume some familiarity with the FLEXnet software suite. Advanced FLEXnet users are encouraged to consult Macrovision's documentation resources for information about more sophisticated license server configurations. New users will also benefit from consulting Macrovision's background and introductory materials:

- FLEXnet Licensing End User Guide (PDF)
- FLEXnet Publisher Download and Information Page for lmgrd and Utilities.

5.1.1 Server - Solaris and Linux

- While Daylight does not require that you download or install the complete Daylight software distribution on the FLEXnet license server, we do recommend that you at least create a Daylight user and group on the FLEXnet license server and set the 'DY_HOME' and 'DY_ROOT' environment variables before proceeding. All Daylight FLEXnet software should be owned by and run as the Daylight user: *never as root*.
- Download the appropriate platform-specific FLEXnet software distribution archive .
- Extract the downloaded .tar.gz archive in `$DY_HOME` to produce a version-specific 'flexVVV' (where `VVV` is the FLEXnet version) directory (e.g. `flex108`).
- Obtain a FLEXnet license file from Daylight. Note that the `testlicense` program is included in both the FLEXnet and standard software distributions.
- Create the directory `$DY_HOME/licenses/flexnet/` and save your license file as `$DY_HOME/licenses/flexnet/daylight.lic`.
- Start the FLEXnet License Server Manager (`lmgrd`) and Vendor Daemon (`daylight`). The processes can be started manually or automatically at boot time via a startup script. An example rc2.d startup/shutdown file, `daylight_flex` is included in the `etc` FLEXnet software distribution subdirectory. To start the daemon manually you may use:
  % `cd $DY_HOME/flexVVV`

then
```
% ./lmgrd daylight \
   -c "$DY_HOME/licenses/flexnet/daylight.lic"
```
Or, if you require a separate `daylight` daemon log file (e.g. $DY_HOME/logs/flex.log):
```
% ./lmgrd daylight \
   -c "$DY_HOME/licenses/flexnet/daylight.lic" \
   -l "$DY_HOME/logs/flex.log"
```
To check the license server status:
```
% ./lmstat daylight
```

5.1.2 Client - Solaris, Linux and Windows

- Perform a <u>basic Daylight software installation</u> on the client machine. Skip the license acquisition and installation steps as you will be using a served floating license file.
- Client machines must have access to a valid FLEXnet license file and license server to run FLEXenabled software. Any of the following environment variables (or Windows Registry entries) can be used:
  ```
  DAYLIGHT_LICENSE_FILE
  LM_LICENSE_FILE
  ```
  Daylight recommends setting 'DAYLIGHT_LICENSE_FILE' to the hostname of the license server:
  ```
  DAYLIGHT_LICENSE_FILE=@hostname
  ```
- Verify the license availability status:
  ```
  % $DY_ROOT/bin/testlicense -v
  ```
- Note that Daylight supports license queueing. If the FLEXnet license server has dispatched the maximum allowable number of licenses for a given FEATURE, it will not be able to issue an additional license for that FEATURE until one of the licenses becomes available. If the environment variable DY_FLEXQUEUE is set to any string, the client will wait till the unavailable license FEATURE is checked back in before proceeding. If DY_FLEXQUEUE is not set, then the client will fail immediately if a license is not available.

5.2 Update FLEXnet Installation

5.2.1 Server - Solaris and Linux

- <u>Download</u> Daylight's most recent FLEXnet software distribution archive.
- Extract the archive into a new version-specific FLEXnet directory.
- Stop the old FLEXnet license server (`lmgrd`) and Daylight vendor daemon (`daylight`) then start the new ones. For example, if you want to upgrade a standard 10.8 installation to 10.9, perform the following:
  ```
  % cd $DY_HOME/flex108
  % ./lmdown -c $DY_HOME/licenses/flexnet/daylight.lic
  % cd $DY_HOME/flex109
  % ./lmgrd daylight \
     -c "$DY_HOME/licenses/flexnet/daylight.lic" \
     -l "$DY_HOME/logs/flex.log"
  ```
  To check the license server status:
  ```
  % ./lmstat daylight
  ```
  You will also need to update any startup scripts to match the new location.

5.2.2 Client - Solaris, Linux and Windows

- Simply <u>upgrade</u> the Daylight software on the client machine. Skip the license acquisition and installation steps as you will be using a served floating license file.
- Environment variables do not need to change.
- To check the license availability status:
    % `$DY_ROOT/bin/testlicense -v`