

Installation & Licensing Guide

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RATIONAL
SOFTWARE CORPORATION

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About This Guide

This guide describes how to install Rational Software products and maintain product licenses:

- Chapter 1, “Installing Rational Software Products,” explains how to install Purify, PureCoverage, Quantify, and PureLink.
- Chapter 2, “Simple Licensing,” describes Simple Licensing and how to use the PureLA License Advisor.

Conventions used in this guide

- `<producthome>` refers to the directory where a specific Rational Software product is installed.
- `Courier` font indicates source code, program names or output, filenames, and commands that you enter.
- Angle brackets `< >` indicate variables.
- *Italics* introduce new terms and show emphasis.



- This icon appears next to instructions for the Sun SPARC SunOS 4.1 operating system.



- This icon appears next to instructions for the Sun SPARC Solaris 2 operating system, also referred to as SunOS 5.



- This icon appears next to instructions for the HP-UX operating system.



- This icon appears next to instructions for the Silicon Graphics IRIX operating system.

Contacting technical support

If you have a technical problem and you can't find the solution in this guide, contact Rational Software Technical Support. See the back cover of this guide for addresses and phone numbers of technical support centers.

Note the sequence of events that led to the problem and any program messages you see. If possible, have the product running on your computer when you call.

For technical information, answers to common questions, and information about other Rational Software products, visit the Rational Software World Wide Web site:

`http://www.rational.com`

To contact technical support directly, visit:

`http://www.rational.com/support`

1

Installing Rational Software Products

This chapter explains how to install Purify, PureCoverage, Quantify, and PureLink. The installation process involves:

- Selecting an installation directory.
- Extracting the product files from the CD-ROM (if you already have a product `tar` file from `ftp`, you can skip this section).
- Running the `pure_install` program for each product you install.
- Making the products you install available to all users.

If you have a current version of a product installed, and only need to add a password, see “Adding new product licenses” on page 2-7.

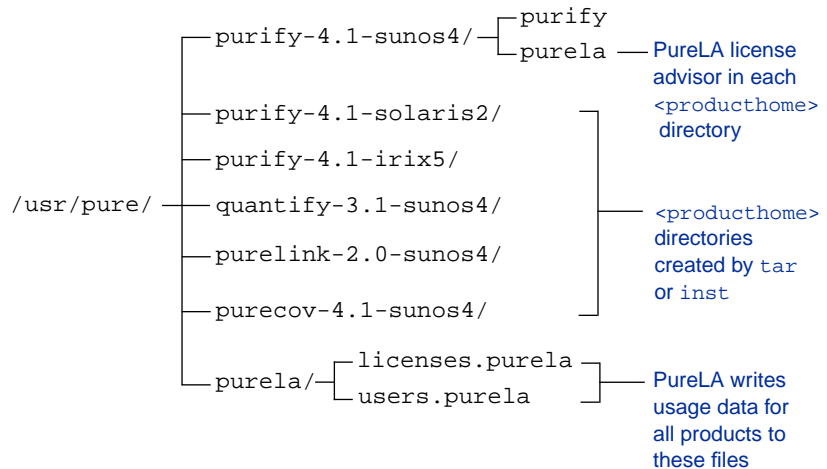
What you need

- The product CD-ROM, or the `tar` file from `ftp`
- 10 megabytes of free disk space *each* for Purify, Quantify, and PureCoverage
- 2 megabytes of free disk space for PureLink
- The license certificate for each product you install

Selecting an installation directory

Select a publicly readable directory, such as `/usr/pure`, to hold your Rational Software products. On IRIX, the `inst` program creates a `/usr/pure` directory by default.

A Rational Software installation directory might look like this:



Note: If you are installing a Rational Software product for your use only, you can install it in your home directory.

The PureLA License Advisor must be able to write to the `purela` subdirectory. In addition, Purify, PureCoverage, and Quantify must be able to write instrumented files to a `cache` subdirectory of the `<producthome>` directory. You can, however, install on a read-only file system if you create symbolic links to a writable file system. See “Installing on read-only file systems” on page 1-11 *before* running the `pure_install` program.

Extracting the product files on Solaris, SunOS 4, and HP-UX

Some of these installation instructions are for specific operating systems. To determine your operating system, type:

```
% uname -a
```

Loading and mounting the CD-ROM

- 1 Load the CD-ROM into the drive. Use a caddy if it is required on your system.



On Solaris systems with the Volume Manager, you do not need to mount the CD-ROM. Go to Step 5.

- 2 Log in as root:

```
% su root
```

- 3 Create a `cdrom` directory if you do not already have one:

```
# mkdir /cdrom
```

- 4 Mount the CD-ROM:



On Solaris systems without the Volume Manager, type:

```
# /etc/mount -r -F hsfs /dev/sr0 /cdrom
```



On SunOS 4, type:

```
# /etc/mount -r -t hsfs /dev/sr0 /cdrom
```



On HP-UX, type:

```
# /etc/mount /cdrom
```

If your HP-UX system is not configured to mount the CD-ROM at `/cdrom`, type:

```
# /etc/mount -r -t cdfs <cdrom-device-name> /cdrom
```

- 5 List the files to verify that the CD-ROM is mounted:

```
# ls -R /cdrom
```

The product CD-ROM contains a README file and the following tar files:

Quantify.tar, Purify.tar, Purecov.tar, Purelink.tar

Note: Some files might be in subdirectories and use uppercase letters.

Creating an installation directory and extracting the files

- 1 Create a publicly readable directory such as /usr/pure to hold your Rational Software products:

```
# mkdir /usr/pure
```

Note: If you are installing a Rational Software product for your use only, you can install it in your home directory.

- 2 Give yourself write permission to the installation directory, because you need to perform the installation as a regular user, not as root:

```
# chown <your-login> /usr/pure
# chmod 755 /usr/pure
```

- 3 Exit root:

```
# exit
```

- 4 Extract the files from the tar file, specifying the full pathname. For example:



```
% cd /usr/pure
% tar xvpf /cdrom/<OS-subdirectory>/purify.tar
```



```
% cd /usr/pure
% tar xvf /cdrom/<OS-subdirectory>/PURIFY.TAR
```

This creates a <producthome> subdirectory for each product using the convention product-version-platform. For example, /usr/pure/purify-4.1-sunos4.

Repeat Step 4 for each product you install.

- 5 Go to “Running the pure_install program” on page 1-6.

Extracting the product files on IRIX



Loading and mounting the CD-ROM

- 1 Log in as root:

```
% su root
```

- 2 If you want to use `mediad`, start it now:

```
# mediad
```

If `mediad` is already running, this causes a harmless error.

- 3 Load the CD-ROM into a caddy, then insert the caddy into the drive.

Note: If you are using `mediad`, the CD-ROM is mounted automatically on the directory `/CDROM`.

Go to “Running the `inst` program” below.

- 4 If you are not using `mediad`, mount the CD-ROM manually:

```
# mount -t iso9660 /dev/scsi/sc0d<n>l0 /CDROM
```

Specify the device `sc0d<n>l0`, using the lowercase letter `l`, *not* the numeral `1`. For `<n>`, type the SCSI channel ID number of the CD-ROM drive.



Running the `inst` program

Note: If you do not want to use the `inst` program, you can install the product files using the `tar` command described on page 1-4.

To install the product files using the `inst` program:

- 1 Go to the distribution directory. For example:

```
# cd /CDROM/irix5/dist
```

- 2 Run the `inst` program:

```
# inst -f .
```

Use the `list` option to display information about the Rational Software product subsystems being installed.

- 3 Type `go` to begin the installation.
- 4 When the installation is complete, type `quit` to exit the `inst` program.
- 5 Go to “Running the `pure_install` program” below.

Running the `pure_install` program

Note: If you are installing on a read-only file system, follow the instructions in “Installing on read-only file systems” on page 1-11 *before* running the `pure_install` program.



If you used the `inst` program to install the product files, you must run the `pure_install` program as root, the same user who installed the product files.

With your Rational Software License Certificate in hand, complete the following steps for each product you install:

- 1 Go to the `<producthome>` directory created by `tar` or `inst`. For example:

```
% cd /usr/pure/purify-4.1-sunos4
```

If you don't remember what directory was created by `tar`, type:

```
% tar tf /cdrom/<OS-subdirectory>/<Product>.tar | head -1
```

- 2 Run the `pure_install` program:

```
% ./pure_install
```

The `pure_install` program prompts you with the following:

- **Enter the license information *exactly* as it appears on your license certificate.**

The `pure_install` program is case sensitive, so enter your license information carefully.

- **Do you want to enable usage aggregation?**

Note: If you are using a temporary evaluation license, the `pure_install` program does not ask if you want to enable usage aggregation.

Usage aggregation is a feature of the PureLA License Advisor, which helps you to keep track of your product licenses and user base by creating a usage database that you can easily query. If your company has separate sites or multiple-product installations, you should enable usage aggregation.

To enable usage aggregation, specify a *new* e-mail address where PureLA can collect usage data. Do *not* use an existing e-mail address. Specify the same address for each product you install.

For example:

```
<purela-stats>@<mycompany>.com
```

After you complete the installation, you must tell PureLA where to create the aggregate database and how often to update the database. For a complete description of how to set up usage aggregation, see “Enabling usage aggregation” on page 2-4.

- **Install man pages?**

If you want to install the man pages in a place that requires root permission, you must wait until after you run the `pure_install` program. You might need to be `root` to install the man pages in a central location such as `/usr/man`, and you might not be `root` at this time.

- **Do you have previous versions of Purify, PureCoverage, Quantify, or PureLink installed?**

Answer yes if you have current installations of Purify 4.0, PureCoverage 4.0, Quantify 2.2, or PureLink 2.0 or greater versions. The PureLA program adds the current users of these products to the new usage database.

Ejecting the CD-ROM

Eject the CD-ROM.



On Solaris with the Volume Manager, type:

```
% eject cdrom
```



On SunOS 4 and Solaris without the Volume Manager, type:

```
% su root
# umount /cdrom
# eject cdrom
# exit
```



On HP-UX, type:

```
% su root
# umount /cdrom
# exit
```

Press the eject button on the CD-ROM drive.



On IRIX, type:

```
% eject /CDROM
```

Making Rational Software products available to all users

To make Purify, PureCoverage, Quantify, and PureLink available to all users, create a symbolic link to `<producthome>/<product>` from a directory such as `/usr/local/bin`. Make sure this is a symbolic link, not a copy or a hard link.

For example:

```
% rm /usr/local/bin/purify
% ln -s /usr/pure/purify-4.1-sunos4/purify /usr/local/bin
```

Repeat this procedure for each product you install.

Note: As an alternative, you can add the `<producthome>/<product>` pathname to each user's `PATH` environment variable, or reference the full pathname in your makefile.

Making Quantify scripts available

To make Quantify available, you also need to create symbolic links to `qv` and to the `qx` script files:

```
% rm /usr/local/bin/qv
% rm -i /usr/local/bin/qx*
% ln -s <quantifyhome>/qv /usr/local/bin
% ln -s <quantifyhome>/qx* /usr/local/bin
```

For more information on the `qx` scripts, see the *Quantify User's Guide*.

Making PureCoverage scripts available

To make PureCoverage available, you also need to create symbolic links to the `pc_*` script files:

```
% rm -i /usr/local/bin/pc_*
% ln -s <purecovhome>/scripts/pc_* /usr/local/bin
```

For more information on the `pc_*` scripts, see the *PureCoverage User's Guide*.

Making debugger scripts available on HP-UX



On HP-UX, Purify, PureCoverage, and Quantify include three scripts that enable you to start instrumented programs under a debugger. You need to create symbolic links to these scripts.

For example, for Purify:

```
% rm /usr/local/bin/purify_dde
% rm /usr/local/bin/purify_xdb
% rm /usr/local/bin/purify_softdebug

% ln -s <purifyhome>/purify_dde /usr/local/bin
% ln -s <purifyhome>/purify_xdb /usr/local/bin
% ln -s <purifyhome>/purify_softdebug /usr/local/bin
```

For PureCoverage and Quantify, create the same symbolic links, substituting `purecov` or `quantify` for `purify`.

Making manual pages available

If you did not install the manual pages when you ran the `pure_install` program, do one of the following now:

- Set your `MANPATH` environment variable to include `<producthome>/man`, or
- Copy the manual pages for the product into your `man` directory. If necessary, log in as `root` to do this.

Notifying users

Notify your users that the Rational Software product is available and they can begin using it by adding the name of the product in front of the link line in their makefiles. For example:

```
a.out: hello_world.o
    purify cc -g hello_world.o
```



On IRIX, you can Purify your executable directly by typing:

```
purify a.out
```

Congratulations! You have completed the installation.

Installing on read-only file systems

The PureLA License Advisor must be able to write to the `purela` subdirectory. In addition, Purify, PureCoverage, and Quantify must be able to write instrumented files to a `cache` subdirectory of the `<producthome>` directory.

If you install Rational Software products on a file system that is mounted read-only by client machines, you must create symbolic links to a writable file system. Do this *before* running the `pure_install` program.

Creating symbolic links to a writable file system

Select a shared directory that is mounted read-write on client machines.

1 Link the `cache` directory to this publicly writable directory:

```
% cd <producthome>
% rm -rf cache
% mkdir /usr/writable/cache
% chmod 777 /usr/writable/cache
% ln -s /usr/writable/cache cache
```

2 Link the `purela` directory to the publicly writable directory:

Warning: Do *not* perform these commands in the `<producthome>` directory or you will delete the `purela` program.

```
% cd </usr/pure>
% rm -rf purela
% mkdir /usr/writable/purela
% chmod 777 /usr/writable/purela
% ln -s /usr/writable/purela purela
```

If there is no writable file system

If there is no writable shared directory mounted on client machines, have each user make a `cache` subdirectory in their

home directory and set the product's `-cache-dir` option to this directory. For example:

```
% mkdir $HOME/cache
% echo $PUREOPTIONS
```

If the `PUREOPTIONS` environment variable is already set, specify the `-cache-dir` option by typing:

```
csh % setenv PUREOPTIONS "-cache-dir=$HOME/cache $PUREOPTIONS"
sh, ksh $ PUREOPTIONS="-cache-dir=$HOME/cache $PUREOPTIONS"; \
export PUREOPTIONS
```

If the `PUREOPTIONS` environment variable is *not* set, type:

```
csh % setenv PUREOPTIONS "-cache-dir=$HOME/cache"
sh, ksh $ PUREOPTIONS="-cache-dir=$HOME/cache"; export \
PUREOPTIONS
```

Add this same specification to your local or central `.cshrc` file, or its equivalent.

2

Simple Licensing

Simple licensing for Purify, PureCoverage, Quantify, and PureLink is trust-based licensing that does not use host IDs, network license servers, or other burdensome locking technology. With Simple Licensing, the application is always available when you need it.

To comply with your license agreement, you voluntarily keep track of your product licenses. If your user base exceeds your number of licenses, you must purchase additional licenses or remove inactive users.

This chapter describes how the PureLA License Advisor helps you keep track of your product licenses and user base. It includes:

- What PureLA does and does *not* do
- How usage aggregation works and how to enable it
- How to identify and remove inactive users
- How to add new product licenses
- Examples of `licenses.purela` and `users.purela` files
- PureLA commands and options
- How to use the `purela_show` command to query the PureLA database

What PureLA does

The PureLA program:

- Collects usage data for each Purify, PureCoverage, Quantify, and PureLink installation in two ASCII files, `users.purela` and `licenses.purela`, located in the `<purelahome>` directory. For examples of these files, see “Examples of PureLA licenses and users files” on page 2-8.
- Automatically adds new users to the database when they begin using a product.
- Automatically removes users from the database if they have not used a product within the last six months.
- Provides an optional usage aggregation capability in which PureLA collects usage data for multiple-product installations in an aggregate database that you can easily query.

What PureLA does *not* do

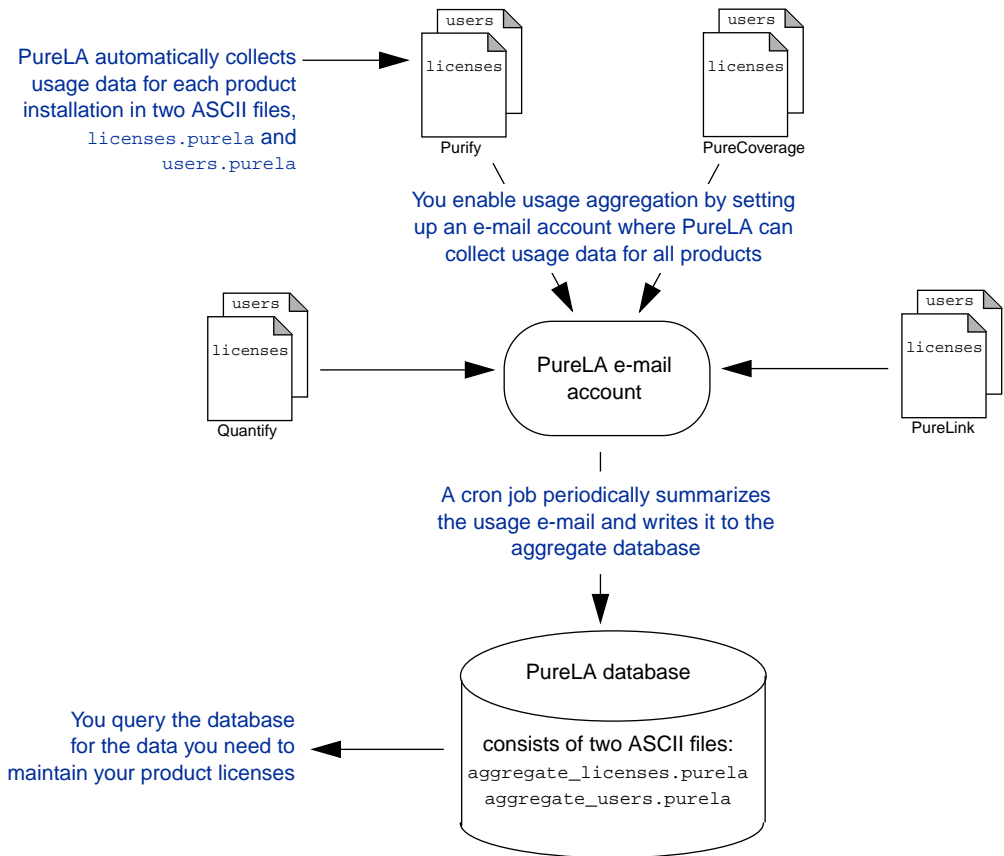
The PureLA program does *not*:

- Warn you if you are close to exceeding your license limit
- Deny access to a product if the number of product users exceeds the number of installed product licenses
- Collect license and user data for product releases prior to Purify 4.0, PureCoverage 4.0, Quantify 2.2, and PureLink 2.0
- Disable licenses if you move or copy the `licenses.purela` file

How usage aggregation works

PureLA usage aggregation helps you keep track of how often your Rational Software products are being used and who is using them. It is especially useful for large companies with separate sites or multiple product installations. Any company, however, can benefit from the summary information provided by usage aggregation.

Here's how usage aggregation works:



Usage aggregation provides easy access to the usage data you need

Enabling usage aggregation

To enable usage aggregation, you need to:

- Specify an e-mail account where PureLA can collect usage data
- Periodically aggregate the usage data, or set up a `cron` job to automate this process

Specifying an e-mail address

To specify an e-mail address:

- 1 Set up a new user account where PureLA can collect usage data. Do *not* use an existing e-mail address, since PureLA must be able to send, receive, and delete mail from this account. You can use any name for your PureLA account that meets your system's requirements. For information about how to create a new user account, see your system administrator.

Note: The examples in this chapter assume that you create a user name of `purela-stats`, with a home directory of `/usr/home/purela-stats` and a mail spool of `/var/spool/mail/purela-stats`.

- 2 Specify the address of the PureLA e-mail account by using the `purela options` command. For example:

```
% cd <producthome>
% ./purela options \
-aggregate-target=purela-stats@mycompany.com
```

Specify the same address for each product you install.

Aggregating the usage data

Use the `purela aggregate` command to summarize the collected usage e-mail and update the aggregate database. For example:

- 1 In the `<producthome>` directory, log in as the user of the PureLA account:

```
% cd <producthome>
% su purela-stats
```

2 Aggregate the usage data:

```
% ./purela aggregate -aggregate-dir=/usr/home/purela-stats \  
-mail-file=/var/spool/mail/purela-stats
```

For `-aggregate-dir`, specify the full pathname of the directory where you want PureLA to create the `aggregate_users.purela` and `aggregate_licenses.purela` and files. You can specify any directory.

For `-mail-file`, specify the full pathname of the mail spool file of the PureLA e-mail account.

Setting up a cron job to aggregate usage data

You can create a `cron` job that automatically aggregates the usage data. For example, to update the database once a month:

1 In the `<producthome>` directory, log in as the user of the PureLA account:

```
% cd <producthome>  
% su purela-stats
```

2 Type:

```
% crontab -e
```

3 Add this entry to the `crontab` file:

```
0 1 1 * * <producthome>/purela aggregate \  
-mail-file=/var/spool/mail/purela-stats \  
-aggregate-dir=/usr/home/purela-stats
```

Specifying a system administrator

PureLA must be able to send mail to a system administrator when it detects an error such as one that prevents aggregation mail from being sent.

To specify the system administrator(s) to receive error messages, specify a list of user names separated by commas. For example:

```
% cd <producthome>  
% ./purela options -admin-list="pat,chris,kam"
```

Disabling usage aggregation

To disable usage aggregation, specify an empty string for the `purela -aggregate-target` option:

```
% cd <producthome>
% ./purela options -aggregate-target=""
```

Identifying and removing inactive users

PureLA automatically removes inactive users from the database if they have not used the product for six months. You can remove inactive users at any time in order to make your licenses available to new regular users.

Identifying inactive users

You can remove users who are no longer regular users of a product. For example:

- Users who stop using a product permanently. Do not remove users who *temporarily* stop using a product, such as users on vacation. These are still regular users.
- Users added by mistake, such as a system administrator automatically added as a user while troubleshooting a problem.
- The user `root`. This is necessary if the person who installed the Rational Software product ran the `pure_install` program as `root`.

Removing a user

To remove a user from the user database, edit the `users.purela` file in the `<purelahome>` directory. Remove the user's name and all associated data from this file.

If the user's data is not in the `users.purela` file in the `<purelahome>` directory, edit the `.users.purela` file in the user's home directory. PureLA creates a `.users.purela` file in each user's home directory if it cannot write to the `<purelahome>` directory.

Adding new product licenses

When you purchase additional licenses for a Rational Software product, you receive a new license certificate that includes a new password and, in some cases, a new serial number.

To add new licenses for a product, run the `pure_install` program. Specify the information exactly as it appears on your new license certificate.

Verifying the license installation

To verify the installation of additional licenses, use the `purela print` command:

```
% ./purela print
```

Controlling access to the PureLA program

To restrict access to the PureLA program to a single system administrator, change the ownership of the PureLA program to that user, and modify PureLA permissions to be owner-executable only. For example:

```
% su root
# chown <sysadmin> purela
# chmod 500 purela
# exit
```

Finding your license serial number

You can retrieve your product license serial number by using the `purela print` command:

```
% cd <producthome>
% ./purela print
```

If your `licenses.purela` file is missing or corrupt, see your system administrator for assistance in locating the backup copy of this file.

Examples of PureLA licenses and users files

A licenses.purela file

```
begin: PureLA license data
header: general information
  purela-version: 2.0
  installed-on: 08-Jul-1996
  installed-by: joe
  admin-list: chris pat
  aggregate-target: purela-stats@mycompany.com
password: 123-45-6789
  licensee: Mycompany, Inc.
  quantity: 100
  expiration: 31-Dec-1996
  attributes:
  product: Purify
  license-type: 100
  serial: 123456
  installed-by: joe
  installed-on: 08-Jul-1996
password: 987-65-4321
  licensee: Mycompany. Inc.
  quantity: 10
  expiration: 31-Dec-1996
  attributes:
  product: PureCoverage
  license-type: 100
  serial: 654321
  installed-by: joe
  installed-on: 08-Jul-1996
end PureLA license data
```

A users.purela file

```
begin: PureLA user data
header: general information
  purela-version: 2.0
  installed-on: 08-Jul-1996
  last-aggregation-sent: 20-Jul-1996
user: theo
  first-use: 09-Jul-1996
  last-use: 20-Jul-1996
  sessions: 14
  product: Purify
  host: neptune
  OS: SunOS
  OS-version: 4.1.1
user: nancy
  first-use: 11-Jul-1996
  last-use: 22-Jul-1996
  sessions: 5
  product: PureCoverage
  host: jupiter
  OS: SunOS
  OS-version: 4.1.1
end PureLA user data
```

PureLA reference

You can use the `purela` program to:

- Configure usage aggregation
- Print the license and user database
- Specify who receives mail about PureLA errors

Use `purela` commands in the `<producthome>` directory:

```
% cd <producthome>
% ./purela <command> [-<option>=<value>...]
```

For a description of the `<producthome>` directory, see page 1-2.

Command	Option	Use
aggregate	-aggregate-dir=<dir>	Specifies the directory where you want PureLA to create the <code>aggregate_licenses.purela</code> and <code>aggregate_users.purela</code> files. You can query these files for aggregate usage and license data.
	-mail-file=<filename>	Specifies the mail spool file for the e-mail address specified to <code>-aggregate-target</code> . This is where PureLA sends license and user data before summarizing it in the <code>-aggregate-dir</code> . Specify the full pathname of the mail spool file. Example: <pre>purela aggregate -aggregate-dir=\ /usr/home/purela-stats \ -mail-file=/var/spool/mail/purela-stats</pre>
help	none	Prints a list of <code>purela</code> commands, options, and syntax.
options	-aggregate-target=<string>	Specifies the aggregation target, the e-mail address where PureLA sends usage data. Example: <pre>purela options -aggregate-target=\ purela-stats@mycompany.com</pre>
	-admin-list=<string>	Specifies the administrators to receive notification about errors in PureLA functionality. Specify a list of administrators' e-mail addresses, separated by commas. Example: <pre>purela options -admin-list="chris,pat"</pre>

Command	Option	Use
print		Prints the contents of the license and user database.
	-product=<name>	The -product option is case sensitive. Specify Purify, PureLink, PureCoverage, Quantify.
	-license-dir=<dir>	Specifies the location of the licenses.purela file.
		Example: purela print -product=Purify -license-dir=\ /usr/local/pure/purela/licenses.purela
remove		Removes a product license.
	-product=<name>	Specifies the name of a Rational Software product. The -product option is case sensitive. Specify Purify, PureLink, PureCoverage, Quantify.
	-serial=<number>	Specifies the serial number of the license.
		Example: purela remove -product=Purify -serial=12003
version	none	Prints the version number of PureLA.

Querying the PureLA database

You can use the `purela_show` query command to generate simplified reports from license and usage data maintained in the PureLA database.

Invoking `purela_show` with no arguments prints the following reports to `stdout`:

VALID LICENSES REPORT

Licensee	Product	Expiration	Serial	Quantity
Brand X, Inc.	PureCoverage	NEVER	94093	2
Brand X, Inc.	Purify	24-Oct-1997	90000	12
Brand X, Inc.	Quantify	01-Oct-1999	91212	2

EXPIRED LICENSES REPORT

Licensee	Product	Expiration	Serial	Quantity
Brand X, Inc.	PureCoverage	28-Oct-1996	91000	2
Brand X, Inc.	Purify	24-Oct-1996	90431	12
Brand X, Inc.	Quantify	01-Oct-1996	90432	2

USER REPORTS

Last Use Date and Number of Sessions per Product per Use

Sessions

User	Product	Last Use	Total	HP-UX	IRIX	Solaris
oneal	PureCoverage	04-Mar-1997	42502	3996	0	4846
jordan	Purify	05-Mar-1997	288033	40494	48055	58218
magic	Quantify	27-Feb-1997	29980	18990	0	7397

SUMMARY REPORT

Number of Users and Number of Valid Licenses per Product

Product	Total	HP-UX	IRIX	Solaris	Licenses
PureCoverage	31	17	0	24	67100
Purify	60	36	21	46	51000
Quantify	27	15	0	12	50108

Using the purela_show command

Use the `purela_show` command in the `<producthome>` directory:

```
% cd <producthome>
% ./purela_show [-<option>=<value>...]
```

The `purela_show` command uses the Perl interpreter, which is automatically installed in the `<producthome>` directory when you install Purify, Quantify, PureCoverage, or PureLink.

For a description of the `<producthome>` directory, see page 1-2.

The `purela_show` command takes numerous options that allow you to customize reports to your exact needs. To print individual reports, use the `-licenses`, `-sessions`, or `-summary` options. You can sort reports by licensee, product, expiration date, serial number, and various other criteria.

For example, to see:

- All users, date last used, and number of times used for all products, type:

```
% ./purela_show -users
```

- All Purify licenses that expire in 1997, type:

```
% ./purela_show -licenses -p=Purify '-e=~1997'
```

- All regular users of Purify and PureCoverage, type:

```
% ./purela_show -users -r -p=Purify -o -p=PureCoverage
```

- Purify users for a specific month:

```
% ./purela_show -users -p=Purify '-d=~Nov-1997'
```

Note: Pattern matching for the selection criteria is *not* case sensitive. There is an implied *and* between each test if multiple test cases are specified.

Purela_show reference

purela_show option	Use
<code>-h -help</code>	Prints a list of command options.
<code>-v</code>	Prints the version number of this command.
<code>-license-dir <directory></code>	Specifies the directory where the PureLA database files are located, "." default. Multiple <code>-license-dir</code> options are supported.
<code>-aggregate</code>	Selects the aggregate database instead of the standard database.
Licenses report options	
<code>-licenses</code>	Selects the licenses report.
<code>-e -expiration [= != < <= > >= =~ !~] <expiration date></code>	Selects the licenses with expiration dates equal to(=), not equal to(!=), less than(<), less than or equal to(<=), greater than(>), greater than or equal to(>=), contains(=~), or does not contain(!~) <expiration date>. Valid date format is dd-mon-yyyy or NEVER.
<code>-l -licensee [= != =~ !~] <licensee name></code>	Selects the licenses with licensee fields equal to (=), not equal to(!=), contains(=~), or does not contain(!~) <licensee name>.
<code>-p -product [= != =~ !~] Purify PureCoverage Quantify</code>	Selects the licenses for the product specified. Case is ignored. Multiple <code>-product</code> options are supported.
<code>-s -sort +s +sort -sort-descending [licensee product expiration serial quantity]</code>	Sorts the License report by licensee, product, serial number or expiration date. <code>-s</code> and <code>-sort</code> sort in ascending order. <code>+s</code> , <code>+sort</code> and <code>-sort-descending</code> sort in descending order. Multiple <code>-sort</code> options are supported.
Users report options	
<code>-users</code>	Selects the Sessions and Summary reports.
<code>-sessions</code>	Selects the Sessions report.
<code>-summary</code>	Selects the Summary report.
<code>-d -lastuse [= != < <= > >= =~ !~] <last use date></code>	Selects the users whose last use date is equal to(=), not equal to(!=), less than(<), less than or equal to(<=), greater than(>), greater than or equal to(>=), contains(=~), or does not contain(!~) <last use date>. Valid date format is dd-mon-yyyy or NEVER.
<code>-p -product [= != =~ !~] Purify PureCoverage Quantify</code>	Selects the users who have used the product specified. Case is ignored. Multiple <code>-product</code> options are supported.

purela_ show option	Use
Users report options, continued	
-r -regular	Selects the users with total sessions equal to or greater than 12 who have used the product in the last six months (definition of a regular user).
-s -sort +s +sort -sort-descending [user product firstuse lastuse sessions hpux irix sunos solaris]	Sorts the Users report by user, product, first-use date, last-use date, total session count, HPUX session count, IRIX session count, SunOS session count, and Solaris session count. -s and -sort sort in ascending order. +s, +sort, and -sort-descending sort in descending order. Multiple -sort options are supported.
-u -user [= != =~ !~] <user name>	Selects the user(s) whose user name is equal to (=), not equal to(!=), contains(=~), or does not contain (!~) <user name>.
Conditional control options	
-o -or	OR the preceding test with the following test.
-a -and	AND the preceding test with the following test. This is the default unless -o is supplied.
()	Groups a set of tests together. These must be escaped if this command is executed by the shell.

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