ASReml 4 (RLM) Linux installation guide

Operating system	Linux
Build platform version details	CentOS release 7 Ubuntu 18
Features	Interactive graphics with hardcopy options EPS, WMF, JPG, HPGL, HPGL2, BMP, WPM

This implementation has been produced under CentOS release 7 and should be suitable for similar Linux versions. It has been successfully tested on many systems including Fedora Core 6 upwards, CentOS, OpenSuse, Debian and Ubuntu. Please contact support@asreml.co.uk if any problems arise.

The files are contained in a compressed download as follows:

`asreml-4.x.b.vvv.rpm` (for CentOS)
`asreml-4.x.b.vvv.deb` (for Debian)

where the letters 'x','b' and 'v' are replaced by the sub-version, build number and build letters of the software.

Small incremental changes to the sub-version may occur during the lifetime of this software, principally to correct bugs that arise in use.

Files included in this installation

The package contains a number of files, some of which are common to all versions, and the executable program which is specific to the target system. The contents of the package are as follows:

/usr/local/vsni/asreml/bin	
`asreml`	Executable image file
`myowngdg.f90`	Example Fortran source for OWN variance structure
/usr/local/vsni/asreml/doc	
`ASReml.htm`	HTML Help files (view in normal browser)
`UserGuideFunctional.pdf`	Principal source of reference
`UserGuideStructural.pdf`	Principal source of reference
`UpdateR4.pdf`	Description of changes from previous versions
`pedigree.pdf`	Description of pedigree options
/usr/local/vsni/asreml/examples	
`functional`	Data and input files for examples contained within the User Guides
`structural`	Data and input files for examples contained within the User Guides

Downloading ASReml 4

Site Reference: On the ASReml download page you will need to enter your **Site Reference**. This is a unique string of letters and numbers that was sent in the Order Confirmation email. If someone other than yourself organized the software purchase you will need to obtain the **Site Reference** from them.

1. Go to the ASReml knowledge base https://asreml.kb.vsni.co.uk/asreml-4-downloads/ then enter your **Site Reference** and other details to access the downloads page.
2. Scroll down to the **Linux Installations** section and download the appropriate file.

Installing ASReml 4

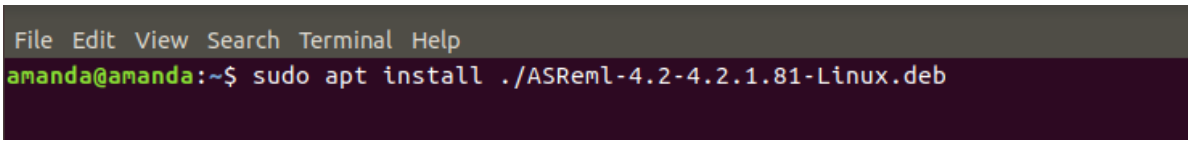
1. Start Linux and navigate to the directory where you downloaded ASReml.
2. Type the installation command shown below, followed by the name of the downloaded ASReml file.

For Ubuntu:

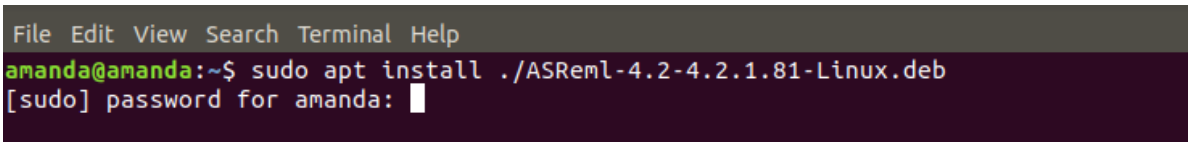
`sudo apt install ./name of downloaded ASReml file.deb` then press ENTER.

For Centos:

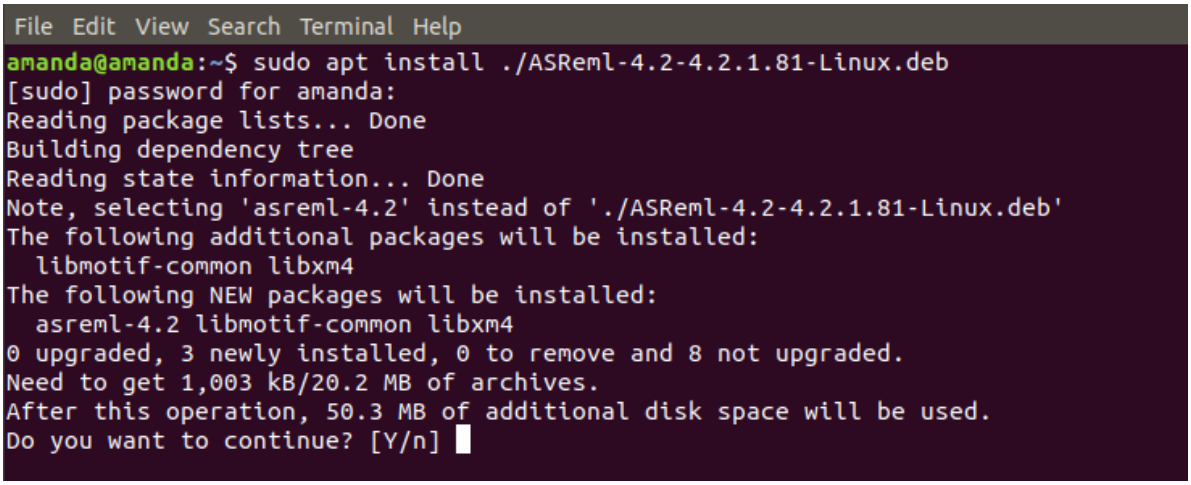
`sudo yum install ./name of downloaded ASReml file.rpm` then press ENTER.



3. You may be prompted to enter your password. If so, enter your password then press ENTER.



4. You may also be prompted to allow installation to continue. If this happens type `Y` to allow ASReml to continue.



After ASReml installs you will be returned to the command prompt. ASReml will install by default into `/usr/local/vsni/asreml/bin`.

5. You will now need to set up an alias. Type the command:

`alias asreml='/usr/local/vsni/asreml/bin'` then press ENTER.

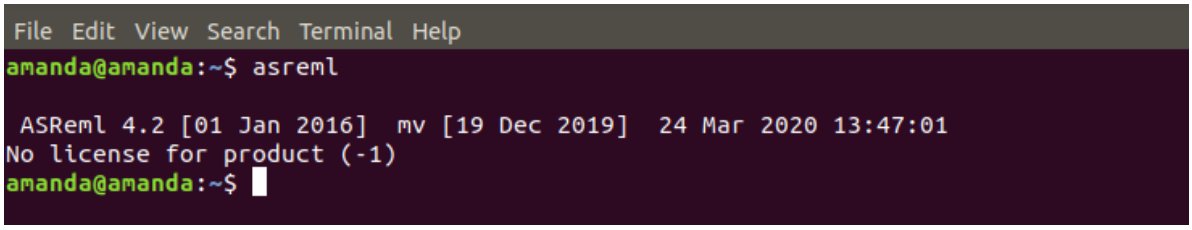
6. Now copy some example scripts to your workspace. This will give you write privileges in this directory.

   `cp -r /usr/local/vsni/asreml/examples/functional asreml-examples`

7. Type `asreml -z` then press ENTER.

   This will show your license status.

   - If your status shows that you already have a license (because you are upgrading, rather than installing for the first time), you can skip to section **Running ASReml 4** to test the installation.
   - If your status shows as '`No license for product`', continue with **Activating ASReml 4**

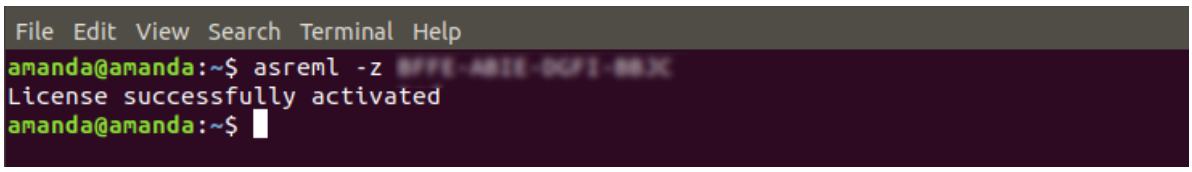


Activating ASReml 4

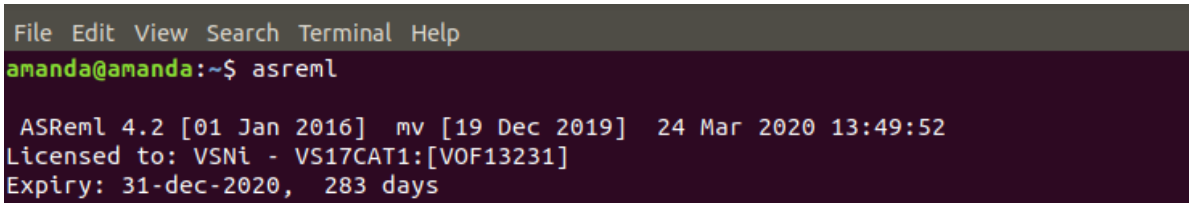
1. To activate your ASReml license, type the 16 digit Activation Code that was emailed to you by customer support then press ENTER.
   (If someone other than yourself organized the software purchase you will need to obtain the Activation Code from them.)

   `asreml -z XXXX-XXXX-XXXX-XXXX`. (Replace `XXXX` with the 16 digit code)

   You'll see the message '`license successfully activated`'.



2. You can view your license details by typing `asreml -z` at the command prompt.



Running ASReml 4

You can now test the installation by running an example.

1. First, create a new folder in your home directory called `barley` by typing `mkdir barley`.

2. Inside the installed `functional` directory you'll find many example files including three whose names begin with `barley`:
   `barley.apj`
   `barley.as`
   `barley.asd`

   We're going to copy these three files into our newly created `barley` directory.

   ```
   cp /usr/local/vsni/asreml/examples/functional/barley* barley/
   ```

3. Check that the files have been copied to your `barley` directory by typing the list command `ls`.

```
File  Edit  View  Search  Terminal  Help
amanda@amanda:~/barley$ ls
barley.apj  barley.as  barley.asd
amanda@amanda:~/barley$
```

4. Now run the `barley` example by typing the following:

   ```
   asreml barley
   ```

```
File  Edit  View  Search  Terminal  Help
amanda@amanda:~/barley$ asreml barley
```

This will produce the following output and open a number of graphs.

```
File  Edit  View  Search  Terminal  Help
amanda@amanda:~/barley$ asreml barley

 ASReml 4.2 [01 Jan 2016]  mv [19 Dec 2019]  24 Mar 2020 14:07:34
Licensed to: VSNi - VS17CAT1:[VOF13231]
Expiry: 31-dec-2020,  283 days
 ASReml 4.2 [01 Jan 2016] Slate Hall example
   Build mv [19 Dec 2019]   64 bit  Linux (x64)
 mv [19 Dec 2019]   2050 Mbyte  barley1

 Univariate analysis of yield
 Summary of 150 records retained of 150 read
 Forming       26 equations:  26 dense.

  Notice: Specify !SIGMAP to allow the Sigma parameterization
 Predict Design Done
   1      125  -739.68       36034.
AGR
 >> >>             Process        CPU_time     SumCPU        Clock    SumClock
 >> >>  Iteration complete: sec       0.01       0.01         0.02        0.02
   1 LogL=-739.681     S2=  36034.          125 df  :   1 components restrained
 >> >>  Iteration complete: sec       0.00       0.01         0.00        0.02
   2 LogL=-712.438     S2=  27792.          125 df
   3 LogL=-702.868     S2=  30117.          125 df
   4 LogL=-700.601     S2=  35000.          125 df
   5 LogL=-700.327     S2=  38372.          125 df
   6 LogL=-700.323     S2=  38713.          125 df
      PVALS     1258.       1501.       1405.       1413.       1514.
   1553.       1379.       1476.       1275.       1213.       1343.
   1455.       1658.       1298.       1456.       1297.       1499.
   1512.       1654.       1674.       1518.       1605.       1311.
   1587.       1592.
   7 LogL=-700.322     S2=  38751.          125 df
  Graphics screen requested
 column                  AR_R    1  0.683770      0.683770      10.80
 row                     AR_R    1  0.458575      0.458575       5.55
   8 mu                              1      12.8   851.12           <
   6 variety                        24      80.0    13.04           <
```

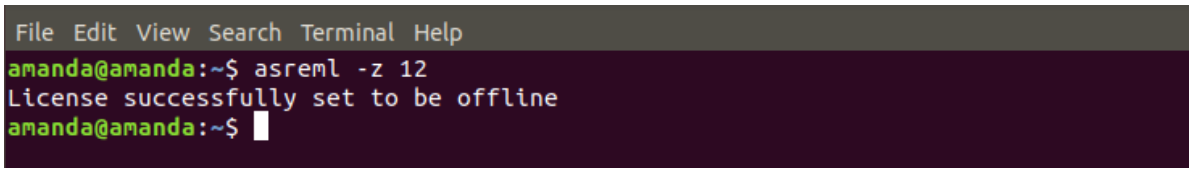
Using your license offline

You can use ASReml without an Internet connection for up to 30 days by taking your ASReml license offline.

1. Ensure you have an Internet connection so that you can connect to the RLM license server.
2. Start ASReml then type `asreml -z` followed by the number of days you want to take your license offline.

Examples

`asreml -z 30` then press ENTER. (This will take your license offline for 30 days).
`asreml -z 12` then press ENTER. (This will take your license offline for 12 days).

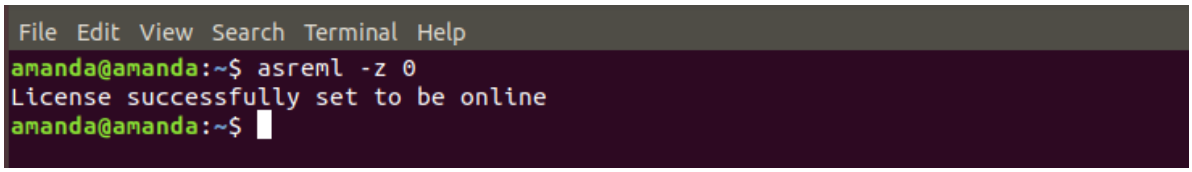


Your license will automatically return to online mode once the offline days have expired. You can also go back online before the offline expiry date by following the instructions below.

Going back online

To return to online mode at any time, do the following:

1. Ensure you have an Internet connection so that you can connect to the RLM license server.
2. Start ASReml then type `asreml -z 0` then press ENTER.



Viewing license status

You can see how many days remain on your license before expiry by checking the license status.

1. Type `asreml -z` then press ENTER.