How do I get new or updated software installed on the unified Linux systems?

Scope

This document provides information about software installed on the Unified Linux Systems managed by the School of Informatics and Computing. There are many other standalone Linux systems in the school that are not part of the unified configuration and, therefore, this document does not apply to those systems.

Software Version Note

Please note that we generally keep the standard version of a package as distributed with the Linux distribution as the default but frequently make newer versions easily accessible using Environment Modules. Please see the following KB page for all the details on how to use modules.

What are modules on the Linux systems and how do I use them?

Available Software

Software is installed in various locations on the unified Linux systems:

- **Standard Paths** - We install many, many packages on these systems using standard RPMs so always check the normal places (/bin, /usr/bin, etc). Your default PATH should be set up by default to search all of these normal locations. If you alter your PATH environment variable from the system default, please be sure that you add to the PATH instead of overriding the default value so you don't lose these system defaults.

- **Local Paths** - We install various packages into a unified /usr/local hierarchy so be sure that /usr/local/bin is in your path. This is in the default path so, again, don't override this default.

- **Modules** - We make many packages (and newer versions of installed packages) available via environment modules. Please see the modules KB page for information about using modules.

- **/l** - There are a number of packages installed into /l. In most cases there links from /usr/local/bin or modules available that make access to this software transparent. But, if all else fails, you may want to poke around in /l and see if you find what you are looking for.

- **RHEL Software Collections** - Red Hat's devtoolset and various other packages are installed in /opt/rh. Here are some ways to invoke them:

  ```bash
  $ scl --list
  devtoolset-1.1
  devtoolset-2
  devtoolset-3
  maven30
  $ scl enable devtoolset-3 'gcc --version'
  gcc (GCC) 4.9.1 20140922 (Red Hat 4.9.1-10)
  Copyright (C) 2014 Free Software Foundation, Inc.
  This is free software; see the source for copying conditions. There is NO warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
  $ scl enable devtoolset-3 bash
  $ which gcc
  /opt/rh/devtoolset-3/root/usr/bin/gcc
  To get a list of new packages: (probably there is a better way??)
  $ rpm -qa devtoolset-3* | sort
  devtoolset-3-3.0-15.el6.noarch
  devtoolset-3-ant-1.9.2-9.14.el6.noarch
  ...
  
  If you want to make this version the default for all logins you can add the appropriate scl command to your .bash_profile which is invoked on login.

Python Module Notes
We are more than happy to install python modules on the SoIC systems. However, please note that it is also possible for you to install modules yourself. Please see the KB page Installing Python Modules In Linux for further information.

**Software Install Requests**

If the software you need is not available in any of the above locations, please Let Us Know and we'll try to get it installed.