

```

diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/Lib/distutils/unixccompiler.py
/projects/ds/redstorm/kull/python/Lib/distutils/unixccompiler.py
--- Python-2.5/Lib/distutils/unixccompiler.py2006-06-27 04:08:25.000000000 SÂND2007-4303P
+++ /projects/ds/redstorm/kull/python/Lib/distutils/unixccompiler.py2007-03-21
15:05:38.000000000 -0700
@@ -159,6 +159,39 @@
     except DistutilsExecError, msg:
         raise CompileError, msg

+
+ def link_shared_object (self,
+                          objects,
+                          output_filename,
+                          output_dir=None,
+                          libraries=None,
+                          library_dirs=None,
+                          runtime_library_dirs=None,
+                          export_symbols=None,
+                          debug=0,
+                          extra_preargs=None,
+                          extra_postargs=None,
+                          build_temp=None,
+                          target_lang=None):
+
+     if output_dir is None:
+         (output_dir, output_filename) = os.path.split( output_filename)
+
+     linkline = "%s %s" % (output_filename[:-2], output_filename)
+
+     for l in library_dirs:
+         linkline = linkline + " -L" + l
+
+     for l in libraries:
+         linkline = linkline + " -l" + l
+
+     # Override static library naming so that it doesn't mangle our name
+     old_fmt = self.static_lib_format
+     self.static_lib_format = "%s%.0s"
+     self.create_static_lib(objects, output_filename,
+                           output_dir, debug, target_lang)
+     self.static_lib_format = old_fmt
+
+     print "Setup line: ", linkline
+
+ def create_static_lib(self, objects, output_libname,
+                       output_dir=None, debug=0, target_lang=None):
+     objects, output_dir = self._fix_object_args(objects, output_dir)
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/Lib/plat-generic/regen
/projects/ds/redstorm/kull/python/Lib/plat-generic/regen
--- Python-2.5/Lib/plat-generic/regen2001-07-31 02:47:55.000000000 -0600
+++ /projects/ds/redstorm/kull/python/Lib/plat-generic/regen2007-03-21
15:05:37.000000000 -0700
@@ -1,3 +1,3 @@
#!/bin/sh
set -v
-python$EXE ../../Tools/scripts/h2py.py -i '(u_long)' /usr/include/netinet/in.h
+yod `which python$EXE` ../../Tools/scripts/h2py.py -i '(u_long)'
/usr/include/netinet/in.h
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/Makefile.pre.in
/projects/ds/redstorm/kull/python/Makefile.pre.in
--- Python-2.5/Makefile.pre.in2006-07-30 10:20:10.000000000 -0600
+++ /projects/ds/redstorm/kull/python/Makefile.pre.in2007-03-21 15:05:43.000000000 -0700
@@ -330,7 +330,7 @@
# Rules

# Default target
-all:$(BUILDPYTHON) oldsharedmods sharedmods
+all:$(BUILDPYTHON) oldsharedmods

```

```

# Build the interpreter
$(BUILDPYTHON):Modules/python.o $(LIBRARY) $(LDLIBRARY)
@@ -470,7 +470,7 @@

$(GRAMMAR_H) $(GRAMMAR_C): $(PGEN) $(GRAMMAR_INPUT)
--$(PGEN) $(GRAMMAR_INPUT) $(GRAMMAR_H) $(GRAMMAR_C)
+-yod $(PGEN) $(GRAMMAR_INPUT) $(GRAMMAR_H) $(GRAMMAR_C)

$(PGEN):$(PGENOBJS)
$(CC) $(OPT) $(LDFLAGS) $(PGENOBJS) $(LIBS) -o $(PGEN)
@@ -620,7 +620,7 @@

# Install almost everything without disturbing previous versions
altinstall:@FRAMEWORKALTINSTALLFIRST@ altbininstall libinstall inclinstall libainstall \
-          sharedinstall oldsharedinstall @FRAMEWORKALTINSTALLLAST@
+          oldsharedinstall @FRAMEWORKALTINSTALLLAST@

# Install shared libraries enabled by Setup
DESTDIRS=$(exec_prefix) $(LIBDIR) $(BINLIBDEST) $(DESTSHARED)
@@ -773,19 +773,19 @@
done
$(INSTALL_DATA) $(srcdir)/LICENSE $(DESTDIR)$(LIBDEST)/LICENSE.txt
PYTHONPATH=$(DESTDIR)$(LIBDEST) $(RUNSHARED) \
-./$(BUILDPYTHON) -Wi -tt $(DESTDIR)$(LIBDEST)/compileall.py \
+yod ./$(BUILDPYTHON) -Wi -tt $(DESTDIR)$(LIBDEST)/compileall.py \
-d $(LIBDEST) -f \
-x 'bad_coding|badsyntax|site-packages' $(DESTDIR)$(LIBDEST)
PYTHONPATH=$(DESTDIR)$(LIBDEST) $(RUNSHARED) \
-./$(BUILDPYTHON) -Wi -tt -O $(DESTDIR)$(LIBDEST)/compileall.py \
+yod ./$(BUILDPYTHON) -Wi -tt -O $(DESTDIR)$(LIBDEST)/compileall.py \
-d $(LIBDEST) -f \
-x 'bad_coding|badsyntax|site-packages' $(DESTDIR)$(LIBDEST)
-PYTHONPATH=$(DESTDIR)$(LIBDEST) $(RUNSHARED) \
-./$(BUILDPYTHON) -Wi -t $(DESTDIR)$(LIBDEST)/compileall.py \
+yod ./$(BUILDPYTHON) -Wi -t $(DESTDIR)$(LIBDEST)/compileall.py \
-d $(LIBDEST)/site-packages -f \
-x badsyntax $(DESTDIR)$(LIBDEST)/site-packages
-PYTHONPATH=$(DESTDIR)$(LIBDEST) $(RUNSHARED) \
-./$(BUILDPYTHON) -Wi -t -O $(DESTDIR)$(LIBDEST)/compileall.py \
+yod ./$(BUILDPYTHON) -Wi -t -O $(DESTDIR)$(LIBDEST)/compileall.py \
-d $(LIBDEST)/site-packages -f \
-x badsyntax $(DESTDIR)$(LIBDEST)/site-packages

@@ -959,7 +959,7 @@
# This installs a few of the useful scripts in Tools/scripts
scriptsinstall:
SRCDIR=$(srcdir) $(RUNSHARED) \
-./$(BUILDPYTHON) $(srcdir)/Tools/scripts/setup.py install \
+yod ./$(BUILDPYTHON) $(srcdir)/Tools/scripts/setup.py install \
--prefix=$(prefix) \
--install-scripts=$(BINDIR) \
--root=$(DESTDIR)
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/Modules/Setup
/projects/ds/redstorm/kull/python/Modules/Setup
--- Python-2.5/Modules/Setup2007-03-14 16:28:32.000000000 -0700
+++ /projects/ds/redstorm/kull/python/Modules/Setup2007-05-29 16:27:15.000000000 -0600
@@ -111,7 +111,7 @@

posix posixmodule.c# posix (UNIX) system calls
errno errnomodule.c# posix (UNIX) errno values
-pwd pwdmodule.c# this is needed to find out the user's home dir
+#pwd pwdmodule.c# this is needed to find out the user's home dir
# if $HOME is not set
_sre _sre.c# Fredrik Lundh's new regular expressions

```

```
_codecs _codecsmodule.c# access to the builtin codecs and codec registry
@@ -164,20 +164,20 @@
```

```
# Modules that should always be present (non UNIX dependent):
```

```
-#array arraymodule.c# array objects
-#cmath cmathmodule.c # -lm # complex math library functions
-#math mathmodule.c # -lm # math library functions, e.g. sin()
-#_struct _struct.c# binary structure packing/unpacking
-#time timemodule.c # -lm # time operations and variables
-#operator operator.c# operator.add() and similar goodies
-#_weakref _weakref.c# basic weak reference support
+array arraymodule.c# array objects
+cmath cmathmodule.c # -lm # complex math library functions
+math mathmodule.c # -lm # math library functions, e.g. sin()
+_struct _struct.c# binary structure packing/unpacking
+time timemodule.c # -lm # time operations and variables
+operator operator.c# operator.add() and similar goodies
+_weakref _weakref.c# basic weak reference support
#_testcapi _testcapi.c # Python C API test module
-#_random _randommodule.c# Random number generator
-#collections collectionsmodule.c # Container types
-#itertools itertoolsmodule.c# Functions creating iterators for efficient looping
-#string stringmodule.c# String manipulations
+_random _randommodule.c# Random number generator
+collections collectionsmodule.c # Container types
+itertools itertoolsmodule.c# Functions creating iterators for efficient looping
+string stringmodule.c# String manipulations
```

```
-#unicodedata unicodedata.c # static Unicode character database
+unicodedata unicodedata.c # static Unicode character database
```

```
# access to ISO C locale support
#_locale _localemodule.c # -lintl
@@ -241,12 +241,14 @@
# Message-Digest Algorithm, described in RFC 1321. The necessary files
# md5.c and md5.h are included here.
```

```
-#_md5 md5module.c md5.c
+_md5 md5module.c md5.c
```

```
# The _sha module implements the SHA checksum algorithm.
# (NIST's Secure Hash Algorithm.)
-#_sha shamodule.c
+_sha shamodule.c
+_sha256 sha256module.c
+_sha512 sha512module.c
```

```
# SGI IRIX specific modules -- off by default.
@@ -421,14 +423,14 @@
```

```
# Helper module for various ascii-encoders
-#binascii binascii.c
+binascii binascii.c
```

```
# Fred Drake's interface to the Python parser
#parser parsermodule.c
```

```
# cStringIO and cPickle
-#cStringIO cStringIO.c
-#cPickle cPickle.c
+cStringIO cStringIO.c
+cPickle cPickle.c
```

```
# Lee Busby's SIGFPE modules.
@@ -464,8 +466,8 @@
#
# More information on Expat can be found at www.libexpat.org.
#
-#EXPAT_DIR=/usr/local/src/expat-1.95.2
-#pyexpat pyexpat.c -DHAVE_EXPAT_H -I$(EXPAT_DIR)/lib -L$(EXPAT_DIR) -lexpat
+#EXPAT_DIR=/projects/ds/redstorm/kull/libs
+pyexpat pyexpat.c -DHAVE_EXPAT_H -I/projects/ds/redstorm/kull/libs/include
-L/projects/ds/redstorm/kull/libs/lib -lexpat

# Hye-Shik Chang's CJKCodecs
@@ -485,3 +487,15 @@
# Another example -- the 'xxsubtype' module shows C-level subtyping in action
xxsubtype xxsubtype.c
+
+mpi /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/mpl.a
+
+_numpy /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/_numpy.a
+multiarray
/projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/multiarray.a
+umath /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/umath.a -lm
+arrayfns /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/arrayfns.a
+ranlib /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/ranlib.a
+lapack_lite
/projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/lapack_lite.a
-L/projects/ds/redstorm/ATLAS/lib -llapack -lcblas -lf77blas -latlas
+fftpack /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/FFT/fftpack.a
+RNG /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/RNG/RNG.a
+_dotblas /projects/ds/redstorm/python2.5/lib/python2.5/site-packages/Numeric/_dotblas.a
-L/projects/ds/redstorm/ATLAS/lib -llapack -lcblas -lf77blas -latlas
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/Modules/makesetup
/projects/ds/redstorm/kull/python/Modules/makesetup
--- Python-2.5/Modules/makesetup2002-03-29 11:00:19.000000000 -0700
+++ /projects/ds/redstorm/kull/python/Modules/makesetup2007-04-02 16:25:15.000000000
-0600
@@ -94,6 +94,8 @@
ExtraLibs="-L$ExtraLibDir -lpython\$(VERSION)";;
esac

+rm -f modules_script.o
+
# Main loop
for i in ${*-Setup}
do
@@ -163,8 +165,10 @@
-Xlinker)libs="$libs $arg"; skip=libs;;
-rpath)libs="$libs $arg"; skip=libs;;
--rpath)libs="$libs $arg"; skip=libs;;
+
+                -l*) echo "INPUT( $arg)" >> modules_script.o;;
+                -L*) arg=`echo $arg | cut -c 3-`; echo "SEARCH_DIR(
$arg)" >> modules_script.o;;
-[A-Zl]*)libs="$libs $arg";;
-.a)libs="$libs $arg";;
+*.a)echo "INPUT( $arg)" >> modules_script.o;; # libs="$libs $arg";;
+.so)libs="$libs $arg";;
+.sl)libs="$libs $arg";;
+/*.o)libs="$libs $arg";;
@@ -254,7 +258,7 @@
esac
LIBS='${LOCALMODLIBS} $(BASEMODLIBS)'
DEFS="BASEMODLIBS=$BASELIBS$NL$DEFS"
```

```

-DEFS="LOCALMODLIBS=$LOCALLIBS$NL$DEFS"
+DEFS="LOCALMODLIBS=$LOCALLIBS modules_script.o $NL$DEFS"

EXTDECLS=
INITBITS=
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/Python/dynload_redstorm.c
/projects/ds/redstorm/kull/python/Python/dynload_redstorm.c
--- Python-2.5/Python/dynload_redstorm.c1969-12-31 17:00:00.000000000 -0700
+++ /projects/ds/redstorm/kull/python/Python/dynload_redstorm.c2007-03-21
15:05:27.000000000 -0700
@@ -0,0 +1,26 @@
+
+/* This module provides simulation of dynamic loading for statically linked
+ modules on Red Storm */
+
+#include "Python.h"
+#include "importdl.h"
+
+
+const struct filedescr _PyImport_DynLoadFiletab[] = {
+{"a", "rb", C_EXTENSION},
+{0, 0}
+};
+
+/* This table is defined in config.c: */
+extern struct _inittab _PyImport_Inittab[];
+
+/* Basically, just search through the list of compiled-in init functions */
+dl_funcptr _PyImport_GetDynLoadFunc(const char *fqname, const char *shortname,
+ const char *pathname, FILE *fp)
+{
+struct _inittab *tab = _PyImport_Inittab;
+while (tab->name && strcmp( shortname, tab->name))
+tab++;
+
+return tab->initfunc;
+}
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/aclocal.m4
/projects/ds/redstorm/kull/python/aclocal.m4
--- Python-2.5/aclocal.m41969-12-31 17:00:00.000000000 -0700
+++ /projects/ds/redstorm/kull/python/aclocal.m42007-03-21 15:05:44.000000000 -0700
@@ -0,0 +1,44 @@
+# _AC_RUN_IFELSE(PROGRAM, [ACTION-IF-TRUE], [ACTION-IF-FALSE])
+# -----
+# Compile, link, and run.
+# This macro can be used during the selection of a compiler.
+# We also remove conftest.o as if the compilation fails, some compilers
+# don't remove it. We remove gmon.out and bb.out, which may be
+# created during the run if the program is built with profiling support.
+m4_define([_AC_RUN_IFELSE],
+[m4_ifvaln([$1], [_AC_LANG_CONFTEST([$1]])]dnl
+rm -f conftest$sac_exeext
+AS_IF([AC_TRY_EVAL(ac_link writeresult.o) && AC_TRY_COMMAND(yod ./conftest$sac_exeext) &&
+ac_status=`cat ./conftest$sac_exeext.result` && echo "Got result code "$ac_status && (exit
+$ac_status)],
+[ $2],
+[echo "$as_me: program exited with status $ac_status" >&AS_MESSAGE_LOG_FD
+_AC_MSG_LOG_CONFTEST
+m4_ifvaln([$3],
+[( exit $ac_status )
+$3])dnl])dnl
+rm -f core *.core gmon.out bb.out conftest$sac_exeext conftest.$sac_objext m4_ifval([$1],
+[conftest.$sac_ext])dnl
+])# _AC_RUN_IFELSE
+
+# _AC_COMPILER_EXEEXT_WORKS

```

```

+# -----
+m4_define([_AC_COMPILER_EXEEXT_WORKS],
+[# Check the compiler produces executables we can run.  If not, either
+# the compiler is broken, or we cross compile.
+AC_MSG_CHECKING([whether the _AC_LANG compiler works])
+# FIXME: These cross compiler hacks should be removed for Autoconf 3.0
+# If not cross compiling, check that we can run a simple program.
+if test "$cross_compiling" != yes; then
+  if AC_TRY_COMMAND([yod ./$ac_file]); then
+    cross_compiling=no
+  else
+    if test "$cross_compiling" = maybe; then
+      cross_compiling=yes
+    else
+      AC_MSG_FAILURE([cannot run _AC_LANG compiled programs.
+If you meant to cross compile, use `--host'.])
+    fi
+  fi
+fi
+AC_MSG_RESULT([yes])
+])# _AC_COMPILER_EXEEXT_WORKS
+
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/pyconfig.h.in
/projects/ds/redstorm/kull/python/pyconfig.h.in
--- Python-2.5/pyconfig.h.in2006-07-30 08:09:47.000000000 -0600
+++ /projects/ds/redstorm/kull/python/pyconfig.h.in2007-03-21 15:05:43.000000000 -0700
@@ -993,4 +993,3 @@
 #endif

 #endif /*Py_PYCONFIG_H*/
-
diff -u -N -r -x '*.o' -x '*.a' -x '*.pyc' Python-2.5/writeresult.c
/projects/ds/redstorm/kull/python/writeresult.c
--- Python-2.5/writeresult.c1969-12-31 17:00:00.000000000 -0700
+++ /projects/ds/redstorm/kull/python/writeresult.c2007-03-21 15:05:45.000000000 -0700
@@ -0,0 +1,31 @@
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>
#include <unistd.h>
#include <stdlib.h>
+
extern int __main( int argc, char *argv[], char *env[]);
extern char* __progrname_full;
extern char* __progrname;
+
void myexit(int code, void *arg);
+
void __attribute__((constructor)) writeexit() {
+  on_exit(myexit, NULL);
+}
+
void myexit(int code, void *arg) {
+  int fd;
+  char ofile[2048];
+
+  printf( "Exiting with code %d\n", code);
+  sprintf( ofile, "%s.result", __progrname_full);
+
+  fd = creat( ofile, 0700);
+  sprintf( ofile, "%d", code);
+  write( fd, ofile, strlen( ofile));
+  close(fd);
+}
+
/* void *x __attribute ((section(".fini"))) = myexit; */

```

