

Re: portable Python ifconfig

Source: <http://coding.derkeiler.com/Archive/Python/comp.lang.python/2007-03/msg00409.html>

- *From:* Bart Van Loon <bbbart@xxxxxxxx>
 - *Date:* Sun, 4 Mar 2007 14:09:20 +0500
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It was Sun, 4 Mar 2007 02:38:58 +0500, when Bart Van Loon wrote:

Hi all,

I'm looking for a portable (FreeBSD and Linux) way of getting typical ifconfig information into Python.

After lots of trial and error (I'm proficient in C at all), I puzzled together the following. It works (at least on FreeBSD and Linux), but is still fairly rough, as it returns an empty string when given a non existing or down interface.

I'll clean it up in due time. :-)

```
#include "Python.h"

#include <sys/types.h>
#include <sys/socket.h>
#include <netdb.h>
#include <netinet/in.h>
#include <unistd.h>
#include <arpa/inet.h>
#include <stdio.h>
#include <ifaddrs.h>
#include <string.h>

// parameters: string (interface name)
// output: string (ip address of interface in decimal notation)
PyObject * ipaddr(PyObject *self, PyObject *args) {

char ip[ 200 ];
char *itf;

if (! PyArg_ParseTuple(args, "s", &itf)) {
PyErr_SetString(PyExc_Exception, "no interface given!");
return NULL;
}
```

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```
struct ifaddrs *ifa = NULL, *ifp = NULL;

if (getifaddrs (&ifp) < 0)
{
perror ("getifaddrs");
return NULL;
}

for (ifa = ifp; ifa; ifa = ifa->ifa_next)
{
socklen_t salen;

if (ifa->ifa_addr->sa_family == AF_INET)
salen = sizeof (struct sockaddr_in);
else if (ifa->ifa_addr->sa_family == AF_INET6)
salen = sizeof (struct sockaddr_in6);
else
continue;

if (strncmp(ifa->ifa_name, itf, sizeof(itf))) {
continue;
}

if (getnameinfo (ifa->ifa_addr, salen,
ip, sizeof (ip), NULL, 0, NI_NUMERICHOST) < 0)
{
perror ("getnameinfo");
continue;
}
break;

}

freeifaddrs (ifp);

return Py_BuildValue("s", ip);
}

static PyMethodDef ifconfig_methods[] = {
{"ipaddr", (PyCFunction)ipaddr, METH_VARARGS, "ipaddr(string)\n"},
{NULL, NULL, 0, NULL}
};

DL_EXPORT(void) initifconfig(void)
{
Py_InitModule3("ifconfig", ifconfig_methods, "Provides a function to get an ip address of a certain interface.\n");
}
```

Inspiration came from and credit goes to the author of
<http://www.hungry.com/~alves/local-ip-in-C.html>

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—
regards,
BBBart

Hobbes : How is the diorama coming along?

Calvin : I'm almost finished.

Hobbes : I don't see the roadrunner. Weren't you going to put one in?

Calvin : See the cotton balls I glued down?

Hobbes : Yeah?

Calvin : The roadrunner just ran out of the scene leaving behind clouds
of dust!

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