NAME

a64l, **l64a**, **l64a_r** - convert between a long integer and a base-64 ASCII string

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <stdlib.h>

long
a64l(*const char *s*);

*char **
l64a(*long int l*);

int
l64a_r(*long int l*, *char *buffer*, *int buflen*);

DESCRIPTION

These functions are used to maintain numbers stored in radix-64 ASCII characters. This is a notation by which 32-bit integers can be represented by up to six characters; each character represents a digit in radix-64 notation. If the type long contains more than 32 bits, only the low-order 32 bits are used for these operations.

The characters used to represent "digits" are '.' for 0, '/' for 1, '0' - '9' for 2 - 11, 'A' - 'Z' for 12 - 37, and 'a' - 'z' for 38 - 63.

The **a64l**() function takes a pointer to a radix-64 representation, in which the first digit is the least significant, and returns a corresponding *long* value. If the string pointed to by *s* contains more than six characters, **a64l**() uses the first six. If the first six characters of the string contain a null terminator, **a64l**() uses only characters preceding the null terminator. The **a64l**() function scans the character string from left to right with the least significant digit on the left, decoding each character as a 6-bit radix-64 number. If the type long contains more than 32 bits, the resulting value is sign-extended. The behavior of **a64l**() is unspecified if *s* is a null pointer or the string pointed to by *s* was not generated by a previous call to **l64a**().

The **l64a**() function takes a *long* argument and returns a pointer to the corresponding radix-64 representation. The behavior of **l64a**() is unspecified if value is negative.

The value returned by **l64a**() is a pointer into a static buffer. Subsequent calls to **l64a**() may overwrite

the buffer.

The **l64a_r**() function performs a conversion identical to that of **l64a**() and stores the resulting
representation in the memory area pointed to by *buffer*, consuming at most *buflen* characters including
the terminating NUL character.

RETURN VALUES

On successful completion, **a64l**() returns the *long* value resulting from conversion of the input string. If
a string pointed to by *s* is an empty string, **a64l**() returns 0.

The **l64a**() function returns a pointer to the radix-64 representation. If value is 0, **l64a**() returns a pointer
to an empty string.

SEE ALSO

strtoul(3)

HISTORY

The **a64l**(), **l64a**(), and **l64a_r**() functions are derived from NetBSD with modifications. They appeared
in FreeBSD 6.1.

AUTHORS

The **a64l**(), **l64a**(), and **l64a_r**() functions were added to FreeBSD by Tom Rhodes
<trhodes@FreeBSD.org>. Almost all of this manual page came from the POSIX standard.