

# Standard data types on UNIX, Linux, and Windows

Learn about standard data types on 32-bit UNIX and Linux®, 64-bit UNIX and Linux, and 64-bit Windows applications.



#### 32-bit UNIX and Linux applications

This section is included for comparison and is based on Solaris. Any differences with other UNIX platforms are noted:

Name	Length
char	1 byte
short	2 bytes
int	4 bytes
long	4 bytes
float	4 bytes
double	8 bytes
long double	16 bytes  Note that on AIX® and Linux PPC a long double is 8 bytes.
pointer	4 bytes
ptrdiff_t	4 bytes
size_t	4 bytes
time_t	4 bytes
clock_t	4 bytes
wchar_t	4 bytes  Note that on AIX a wchar_t is 2 bytes.



### **64-bit UNIX and Linux applications**

This section is based on Solaris. Any differences with other UNIX platforms are noted:

Name	Length	
char	1 byte	
short	2 bytes	
int	4 bytes	
long	8 bytes	
float	4 bytes	
double	8 bytes	
long double	16 bytes  Note that on AIX and Linux PPC a long double is 8 bytes.	
pointer	8 bytes	
ptrdiff_t	8 bytes	
size_t	8 bytes	
time_t	8 bytes	
clock_t	8 bytes  Note that on the other UNIX platform a clock_t is 4 bytes.	
wchar_t	4 bytes  Note that on AIX a wchar_t is 2 bytes.	

■ Windows

## Windows 64-bit applications

Name	Length		
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Name	Length
char	1 byte
short	2 bytes
int	4 bytes
long	4 bytes
float	4 bytes
double	8 bytes
long double	8 bytes
pointer	8 bytes Note that all pointers are 8 bytes.
ptrdiff_t	8 bytes
size_t	8 bytes
time_t	8 bytes
clock_t	4 bytes
wchar_t	2 bytes
WORD	2 bytes
DWORD	4 bytes
HANDLE	8 bytes
HFILE	4 bytes

Windows

# **Coding considerations on Windows**

#### **HANDLE** hf;

Use