

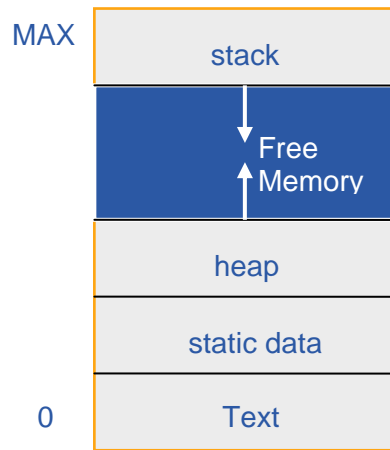
.1

:



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:Text (1)

:Data (2)

:


:



:

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.Stack 


Procedures

.Heap 

Heap


.2

: 

: 

: 

:

Unix shell 

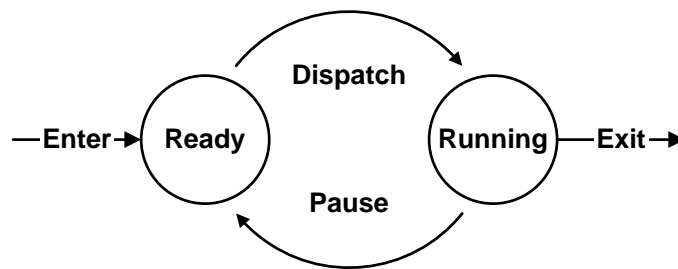




:Running

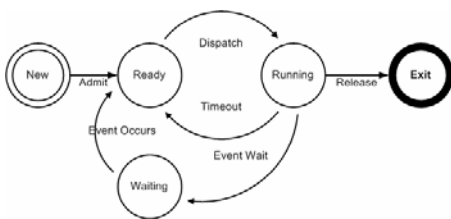
: Ready

Current Process

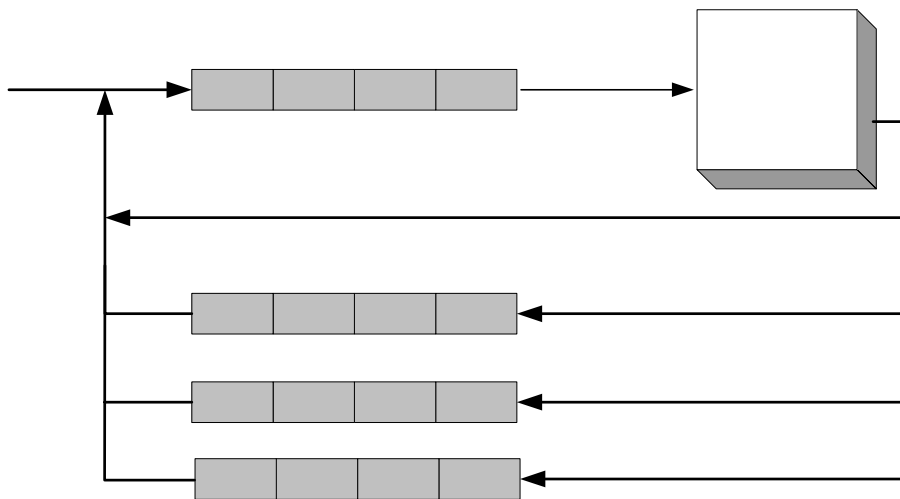
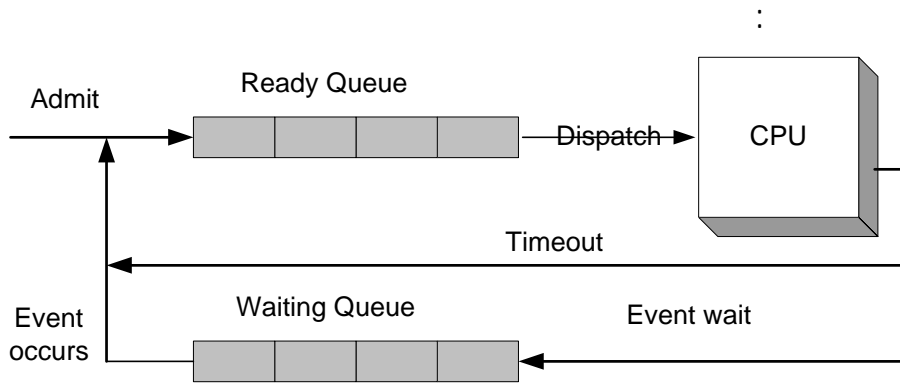


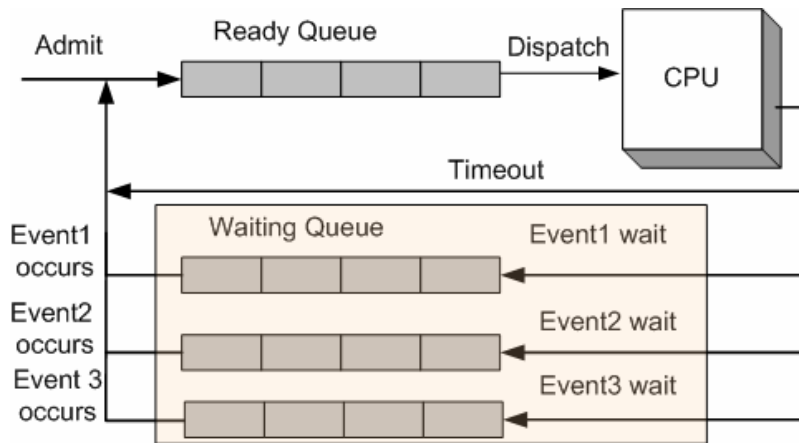
:
1

Cat-n testfile | more :UNIX

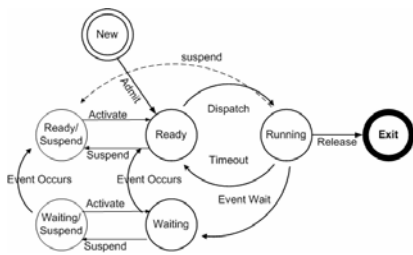


waiting





suspended



.suspended-ready Suspended-waiting :

.4

.DOS

:)

.(

DOS

TSR: Terminate And Stay Resident

.Windows

Unix

.()

concurrency

.parallel

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Interrupt



.(waiting)



:

:scheduling



scheduling

:Process context



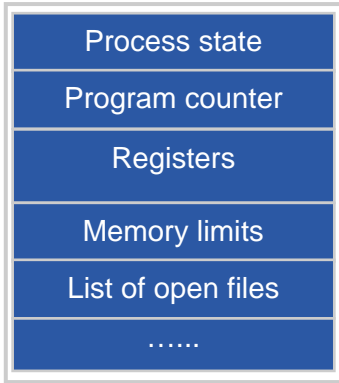
.Process context

.context switching

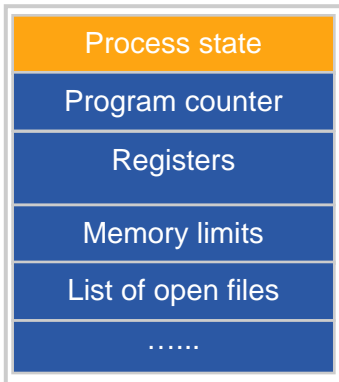
:

:

.Process control block



Processor Status Word



.Unix

shell

:CPU state

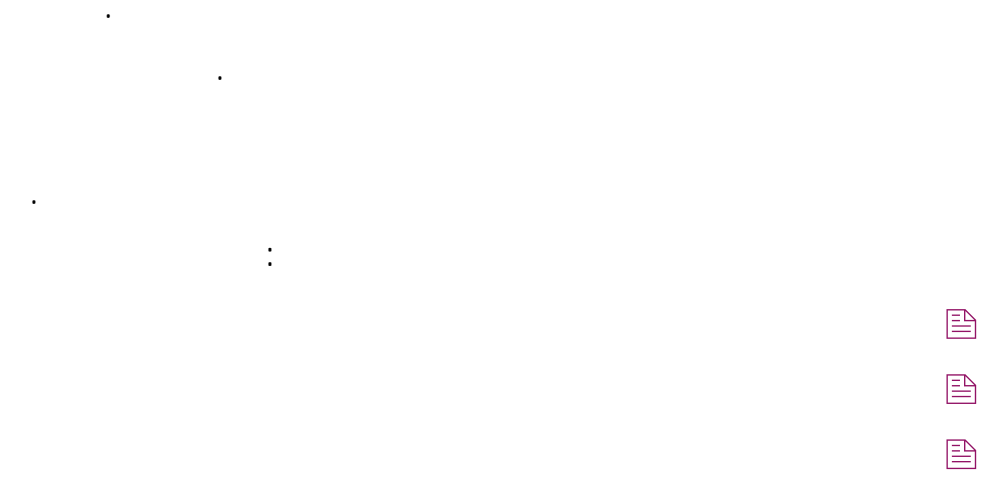
EFLAGS

Processor Status Word

Pentium



Resource Descriptors



:Create

(1)

(2)

(3)

:Create

Ready

- (4
- (5
- (6
- (7
- (8

Suspend

- (1
- (2
- (3

Activate

- (1
- (2

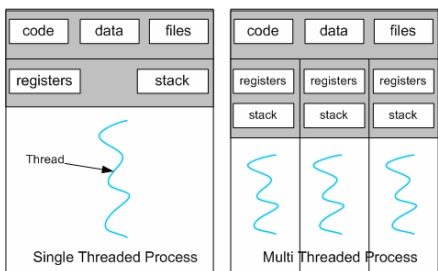
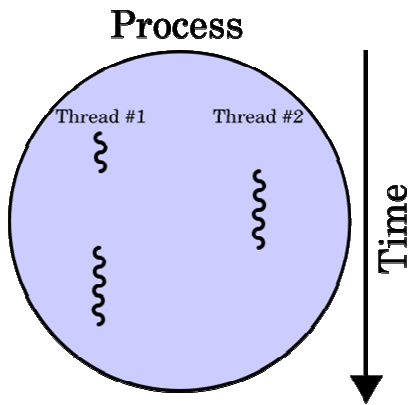
Destroy

- (1
- (2
- (3
- (4

Change Priority

- (1
- (2

Threads .5



2

Solaris

30



5

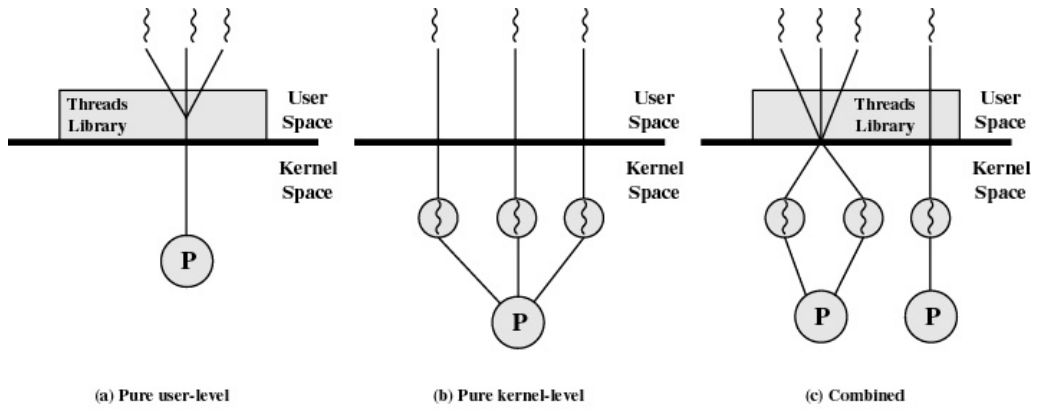
Solaris



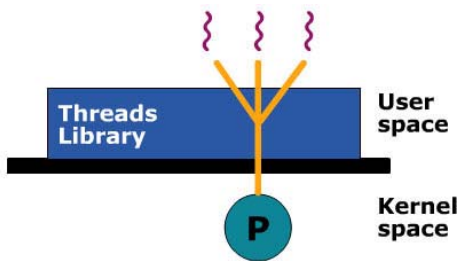
Progress bar

user threads

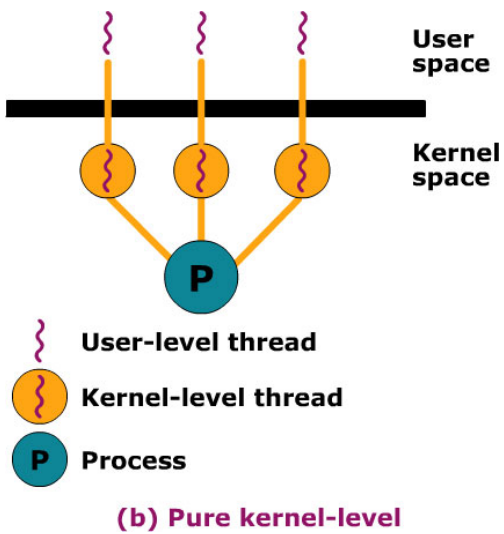
kernel threads

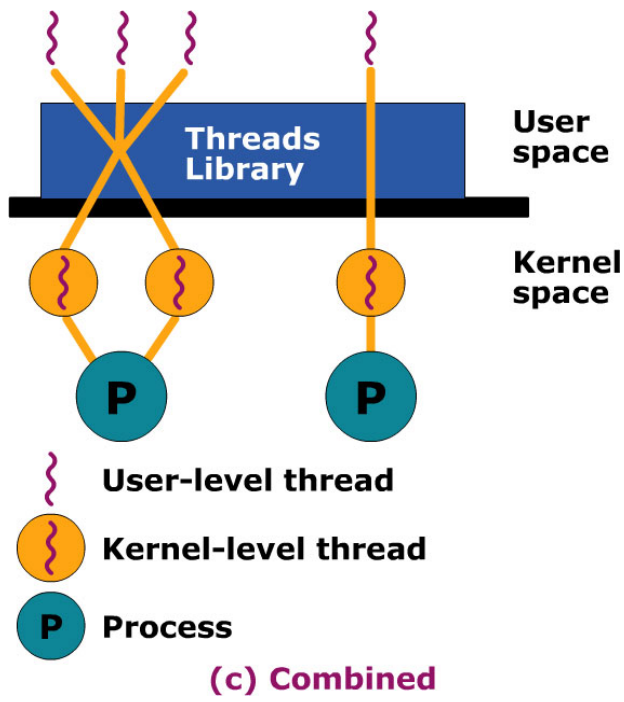


User-level thread
 Kernel-level thread
 Process



.GNU Portable Threads





HP-

Unix

.UX, Tru64

Win32

POSIX Pthreads

:

.Java

:exec fork()

exec

fork

fork

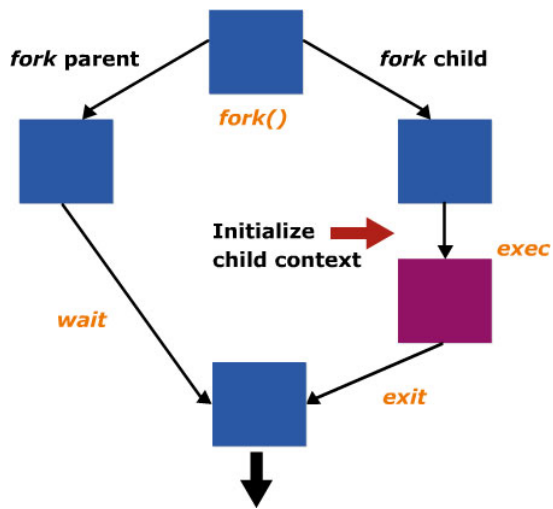
:

:exec fork()

.fork

exec

:Cancellation



:Cancellation



.Pthreads

Cancellation points

:Signal handling

UNIX

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(1

(2

(3

:Signal handling

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(3

(4

UNIX

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transactions

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upcall

(1

(2

:

(3

/

(4

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(5

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(6

