NAME

kernel – UNIX system executable file containing basic operating system services

SYNOPSIS

/platform/*platform-name***/kernel/unix** [**–arsv**]
/kernel/genunix

AVAILABILITY

SUNWcar

DESCRIPTION

The operating system image, or kernel, is the collection of software made up of the core image file (**unix**) and all of the modules loaded at any instant in time. The system will not function without a kernel to control it.

The kernel is loaded by the **boot**(1M) command in a machine-specific way. The kernel may be loaded from disk or CDROM ("diskfull boot") or over the network ("diskless boot"). In either case, the directories under **/platform** and **/kernel** must be readable and must contain executable code which is able to perform the required kernel service. If the **–a** flag is given, the user is able to supply different pathnames for the default locations of the kernel and modules.

The **'moddir'** variable contains a colon-separated list of directories that the kernel searches for modules. **'moddir'** can be set in the **/etc/system** file; it defaults to **/platform/***platform-name***/kernel:/kernel:/usr/kernel** (where *platform-name* is the name of the platform implementation).

platform-name can be found using the **–i** option of **uname**(1).

The kernel configuration can be controlled using the **/etc/system** file (see **system**(4)).

/kernel/genunix is the platform-independent component of the base kernel.

OPTIONS

–a Ask the user for configuration information, such as where to find the system file, where to mount **root**, and even override the name of the kernel itself. Default responses will be contained in square brackets ([]), and the user may simply enter RETURN to use the default response (note that RETURN is labeled ENTER on some keyboards). **/dev/null** may be entered at the prompt which asks for the pathname of the system configuration file. See **system**(4).

–r Reconfiguration boot. The system will probe all attached hardware devices and assign nodes in the file system to represent only those devices actually found. It will also configure the logical namespace in **/dev** as well as the physical namespace in **/devices**. See **add_drv**(1M) and **rem_drv**(1M) for additional information about maintaining device drivers.

–s Boot only to init level 's'. See **init**(1M).

–v Boot with verbose messages enabled. If this flag is not given, the messages are still printed, but the output is directed to the system logfile. See **syslogd**(1M).

SPARC EXAMPLES

To boot in single-user interactive mode, use one of the following:

ok boot –as

ok boot kernel/unix –as

ok boot disk3 kernel/unix −as

x86 EXAMPLES

To boot in single-user interactive mode, use one of the following:

>b −as

>b kernel/unix −as

FILES

/kernel Contains kernel components common to all platforms within a particular instruction set that are needed for booting the system. of the core image file.

/platform/*platform-name***/kernel** The platform-specific kernel components.

/usr/kernel Contains kernel components common to all platforms within a particular instruction set.

Each of the directories listed above can potentially contain the following subdirectories:

drv	Loadable device drivers
exec	The modules to execute processes
fs	File system modules
misc	Miscellaneous system-related modules
sched	Operating system schedulers
strmod	System V STREAMS loadable modules
sys	Loadable system calls

x86 Only

mach x86 hardware support

SEE ALSO

uname(1), **add_drv**(1M), **boot**(1M), **kadb**(1M), **rem_drv**(1M), **savecore**(1M), **syslogd**(1M), **system**(4)

SPARC Only

monitor(1M)

DIAGNOSTICS

The kernel gives various warnings and error messages. If the kernel detects an unrecoverable fault, it will panic or halt.

BUGS

Bugs in the kernel often result in kernel panics.

Reconfiguration boot does not currently remove filesystem entries for devices that have been physically removed from the system.