

Quick Reference: Solaris to AIX
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Quick Reference: Solaris to AIX

Use this reference to contrast the AIX Version 5.1 and Solaris 8 operating systems. The following tables contrast common tasks on these operating systems. Tasks are grouped according to major categories that are listed below. Each major category is contained within a table. Tables can also include location information of files or pertinent information that is related to the category they contain.

For detailed information about the AIX operating system, refer to the following Web address: <http://www.ibm.com/servers/aix/library/>.

AIX library information is listed under *Technical Publications*.

This reference provides information on AIX and Solaris in the following categories:

- Packaging
- Installing and Upgrading Tasks
- Booting and Shutting Down
- User Management Tasks
- Device Management and Configuration
- Network Management and Configuration
- Printer Management and Configuration
- File System Management
- Virtual Disk Management
- Logical Volume Management
- Troubleshooting and Additional Location Information

Packaging

The following information contrasts AIX and Solaris packaging details.

Table 1.

Units	AIX Version 5.1.0	Solaris 8
Smallest installable unit	fileset	package
Single installable image; must be distributed and installed as a unit	package	package
Logical grouping of packages	bundle	software cluster
Logical grouping of packages and software clusters	Bundle offering, for example: <ul style="list-style-type: none">• App-Dev: Application Development Environment• Client:<ul style="list-style-type: none">– Pers-Prod– DCE-Client– Media-Defined	Software configuration clusters, for example: <ul style="list-style-type: none">• Core: Required operating system files• End-User System Support: Core plus window environment• Developer System Support: End-User plus the development environment• Entire Distribution: Developer System plus enhanced features• Entire Distribution Plus OEM: Entire Distribution plus third-party hardware drivers (on SPARC only)

Installing and Upgrading Tasks

The information contrasts AIX and Solaris installing and upgrading tasks.

Table 2.

Tasks	AIX Version 5.1.0	Solaris 8
Install packages	installp -a <i>or</i> smitty install_latest (fast path)	pkgadd
Display installed packages	lspp -L <i>or</i> smitty list_installed_sw (fast path)	pkginfo <i>or</i> pkgparam
Remove software package	installp -r (for applied package) <i>or</i> smitty reject (fast path) installp -u (for committed package) <i>or</i> smitty remove (fast path)	pkgrm
Upgrade a package	installp -a	N/A
Verify correct installation	lppchk <i>or</i> smitty check_files (fast path)	pkgchk
Install a patch	instfix <i>or</i> smitty update_by_fix (fast path)	patchadd
Remove a patch	installp -r <i>or</i> smitty reject (fast path)	patchrm
Display installed patches	instfix -ia	showrev -p
Install OS on another disk (Alternate disk installation)	alt_disk_install	Live Upgrade
Create an installation server for network installation	nimconfig	setup_install_server <i>install_dir_path</i>
Create a boot server for network installation	smitty nim_config_env	setup_install_server -b <i>bootdirpath</i>
Set up a client for network installation	nim -o bos_inst	add_install_client

Booting and Shutting Down

The following displays processes and locations of items that are involved in booting and shutting down a system in AIX and Solaris.

Table 3.

Tasks/Locations	AIX Version 5.1.0	Solaris 8
Boot process	<p>Phases:</p> <ul style="list-style-type: none"> • Read Only Storage (ROS): Check the system board, perform Power-On Self-Test (POST), locate the boot image, load the boot image into memory, begin system initialization and execute phase 1 of the <code>/etc/rc.boot</code> script • Base Device Configuration: Start Configuration Manager to configure base devices • System Boot: Start <code>init</code> process phase 2, switch to hard-disk root file system, start other processes defined by records in the <code>/etc/inittab</code> file and execute phase 3 of the <code>/etc/rc.boot</code> script 	<p>Phases:</p> <ul style="list-style-type: none"> • Boot PROM: Display system information, run POST, load bootblk, locate ufsboot • Boot Programs: bootblk loads and executes the ufsboot • Kernel Initialization: ufsboot loads and executes the core kernel, initializes core kernel data structures, loads other kernel modules based on the <code>/etc/system</code> file, starts <code>/sbin/init</code> program • <code>init</code>: Starts other processes based on the <code>/etc/inittab</code> file
Kernel modules directory	<p>Kernel and kernel extension modules are stored in two directories:</p> <ul style="list-style-type: none"> • <code>/usr/lib/boot</code> • <code>/usr/lib/drivers</code> 	<p>Kernel modules are stored in three directories:</p> <ul style="list-style-type: none"> • <code>/platform/sparc/kernel</code> or <code>/platform/i86pc/kernel</code> • <code>/kernel</code> • <code>/usr/kernel</code>
System run levels	<p>Defined run levels:</p> <ul style="list-style-type: none"> • 0-1: Reserved for future use • 2: Multiuser mode with NFS resources shared (default run level) • 3-9: Defined according to the user's preferences • m,M,s,S: Single-user mode (maintenance level) • a,b,c: Starts processes assigned to the new run levels while leaving the existing processes at the current level running • Q,q: <code>init</code> command to reexamine the <code>/etc/inittab</code> file <p>Note: When a level from 1 to 9 is specified, the <code>init</code> command kills processes at the current level and restarts any processes associated with the new run level based on the <code>/etc/inittab</code> file.</p>	<p>Eight run levels:</p> <ul style="list-style-type: none"> • 0: Power-down state • s or S: Single-user state • 1: Administrative state • 2: Multiuser state • 3: Multiuser state with NFS resources shared (default run level) • 4: Alternative multiuser (not in use) • 5: Power-down state • 6: Reboot state
Determine a system's run level	<code>who -r</code>	<code>who -r</code>

Table 3. (continued)

Tasks/Locations	AIX Version 5.1.0	Solaris 8
Change a system's run level	telinit <i>level number</i>	Choose one of the following: <ul style="list-style-type: none"> • halt • init • poweroff • reboot • shutdown • telinit • uadmin
Startup script	/etc/rc	/sbin/rc <i>run-level number</i>
Use new kernel	bosboot	N/A
Display boot information	bootinfo	N/A
Display or alter the list of boot devices	bootlist	boot
Shutdown and reboot	shutdown -Fr	reboot or shutdown -i 6
Shutdown	shutdown or halt	halt <i>or</i> poweroff

User Management Tasks

The following displays tasks and location of files or information that is needed to perform user management in AIX and Solaris.

Table 4.

Tasks/Locations	AIX Version 5.1.0	Solaris 8
Run multiple tasks in a GUI environment	Choose one of the following: <ul style="list-style-type: none"> • smitty users (fast path) • smitty • wsm 	admintool
Add a user	mkuser	useradd
Remove a user	rmuser	userdel
Change a user	chuser	usermod
List users	lsuser	listusers
Password files	/etc/passwd <i>and</i> /etc/security/passwd	/etc/passwd <i>and</i> /etc/shadow
Group files	/etc/group <i>and</i> /etc/security/group	/etc/group
Process resource limits for users	/etc/security/limits	N/A

Table 4. (continued)

Tasks/Locations	AIX Version 5.1.0	Solaris 8
Systemwide environment file	<code>/etc/profile</code> <i>and</i> <code>/etc/environment</code>	N/A
Configuration information for user authentication	<code>/etc/security/user</code>	<code>/etc/pam.conf</code>
Profile template	<code>/etc/security/.profile</code>	<code>/etc/skel/local.profile</code>

Device Management and Configuration

The following is a list of tasks that are used for device management and configuration in AIX and Solaris.

Table 5.

Tasks	AIX Version 5.1.0	Solaris 8
Run multiple tasks in a GUI environment	Choose one of the following: <ul style="list-style-type: none"> • smitty device (fast path) • smitty • wsm 	admintool
Configure a device	cfgmgr	Choose one of the following: <ul style="list-style-type: none"> • drvconfig • devlinks • disks • tapes • ports
Define a device	mkdev	Choose one of the following: <ul style="list-style-type: none"> • drvconfig • devlinks • disks • tapes • ports
Remove a device	rmdev	rem_drv
Change a device	chdev	N/A
List devices	lsdev	sysdef

Network Management and Configuration

The following are tasks that are employed when performing network management and configuration in AIX and Solaris.

Table 6.

Tasks	AIX Version 5.1.0	Solaris 8
Run multiple tasks in a GUI environment	Choose one of the following: <ul style="list-style-type: none">• smitty tcpip (fast path)• smitty• wsm	N/A
Configure TCP/IP	mktcpip	Editing all of the following: /etc/hostname.* /etc/inet.* /etc/defaultrouter /etc/defaultdomain
Display interface settings	ifconfig	ifconfig
Configure interface	ifconfig	ifconfig
Change name service	chnamsv	vi /etc/nsswitch.conf
Unconfigure name service	rmnamsv	vi /etc/nsswitch.conf
Display name service	lsnamsv <i>or</i> cat /etc/resolv.conf	cat /etc/nsswitch.conf
Configure host name resolution order	vi /etc/netsvc.conf <i>or</i> NSORDER environment variable	vi /etc/nsswitch.conf

Printer Management and Configuration

The following displays tasks that are involved in printer management and configuration in AIX and Solaris.

Table 7.

Tasks	AIX Version 5.1.0	Solaris 8
Run multiple tasks in a GUI environment	Choose one of the following: <ul style="list-style-type: none"> • smitty print (fast path) • smitty • wsm 	admintool
Add a printer	mkdev	lpadmin
Start a print queue	qadm (AIX printing subsystem) <i>or</i> lpc (System V)	enable
Stop a print queue	qadm (AIX printing subsystem) <i>or</i> lpc	disable
Display print queue status	lpstat	lpstat
Cancel a print job	qcan	cancel
Add a print queue	Choose one of the following: <ul style="list-style-type: none"> • AIX printing subsystem: <ul style="list-style-type: none"> – mkque – mkquedev – mkvirprt • System V: <ul style="list-style-type: none"> – lpadmin -p 	lpadmin
Change a print queue	Choose one of the following: <ul style="list-style-type: none"> • AIX printing subsystem: <ul style="list-style-type: none"> – chque – chquedev – chvirprt • System V: <ul style="list-style-type: none"> – lpadmin -p 	lpadmin
Remove a print queue	Choose one of the following: <ul style="list-style-type: none"> • AIX printing subsystem: <ul style="list-style-type: none"> – rmque – rmquedev – rmvirprt • System V: <ul style="list-style-type: none"> – lpadmin -x 	lpadmin
Display settings of a print queue	Choose one of the following: <ul style="list-style-type: none"> • AIX printing subsystem: <ul style="list-style-type: none"> – lsque – lsquedev – lsvirprt • System V: <ul style="list-style-type: none"> – lpstat 	lpadmin

File System Management

The following are tasks that are employed when performing file system management in AIX and Solaris.

Table 8.

Tasks	AIX Version 5.1.0	Solaris 8
Run multiple tasks in a GUI environment	Choose one of the following: <ul style="list-style-type: none">• smitty fs (fast path)• smitty• wsm	N/A
Format a disk	N/A - Automatically handled	format
Check a file system	fsck	fsck
Mount a file system	mount	mount
Display available file-system space	df	df
Partition a disk	N/A - Automatically handled	format
List a volume's table of contents	lchangelv	prtvtoc
Add a file system	crfs	newfs <i>or</i> mkfs
Unmount a file system	umount	umount
Back up file systems/files/directories	backup	ufsdump
Restore file systems/files/directories	restore	ufsrestore
Change a file system	chfs	tunefs
Remove a file system	rmfs	N/A
Display file system information	lsfs <i>or</i> cat /etc/filesystems	cat /etc/vfstab
Display file system mount table	mount	/etc/mtab

Virtual Disk Management

The following is a list of tasks that are used when implementing virtual disk management in AIX and Solaris.

Table 9.

Tasks	AIX Version 5.1	Solaris 8
Run multiple tasks in a GUI environment	smitty chjfs <i>or</i> wsm	metatool
Expand file system	chfs <i>or</i> smitty chjfs	growfs
Delete metadevice	N/A	metaclear
Configure metadevice	N/A	metainit

Table 9. (continued)

Tasks	AIX Version 5.1	Solaris 8
Modify metadvice	N/A	metaparam
Rename metadvice	N/A	metarename
Display status of metadvice	N/A	metastat

Logical Volume Management

The following is a list of tasks that are used when performing logical volume management in AIX and Solaris. The information in this table includes Solaris 8 and the Veritas Volume Manager (VxVM). IBM includes its Logical Volume Manager (LVM) in AIX Version 5.1.

Table 10.

Tasks	AIX Version 5.1.0	Solaris 8
Storage Structure	<p>A <i>disk</i> is composed of <i>physical partitions</i>.</p> <p>A <i>physical volume</i> is a physical disk the same thing as a <i>disk</i>.</p> <p>A <i>volume group</i> is composed of <i>physical volumes</i>.</p> <p>A <i>volume group</i> is divided into <i>logical volumes</i>.</p> <p>A <i>file system</i> is placed onto a <i>logical volume</i>.</p> <p>A <i>logical volume</i> is extensible and can reside on more than one <i>physical volume</i>.</p>	<p>A <i>disk</i> is composed of <i>partitions/slices</i>.</p> <p>A <i>file system</i> is placed onto a <i>partition</i>.</p> <p>A <i>subdisk</i> (somewhat similar to AIX physical partition) is composed of <i>partitions/slices</i>.</p> <p>A <i>plex</i> (similar to AIX logical partition) is composed of <i>subdisks</i>.</p> <p>A <i>volume</i> (similar to AIX logical volume) is composed of <i>plexes</i>. A <i>VM disk</i> is composed of <i>subdisks</i>.</p> <p>A <i>disk group</i> (similar to AIX volume group) is composed of <i>VM disks</i>.</p>
Run multiple tasks in a GUI environment	Choose one of the following: <ul style="list-style-type: none"> • smitty lvm (fast path) • smitty • wsm 	vxva
Move logical volume to another physical volume	migratepv	vxassist move
Create logical volume	mklv	vxassist make
Extend logical volume	extendlv	vxassist growto
Remove logical volume	rmlv	vxedit rm
Create volume group	mkvg	vxvg init
Remove disk from volume group	reducevg	vxvg rmdisk
Add disks under volume manager	extendvg	vxdiskadd
Administer disks	reducevg <i>or</i> extendvg	vxdiskadm
Set up disks	extendvg	vxdisksetup

Table 10. (continued)

Tasks	AIX Version 5.1.0	Solaris 8
Change logical volume settings	chlv	vxedit set
Create configuration records for storage structures	mkvg <i>or</i> mklv	vxmake
Manage plexes or volume groups	chvg <i>or</i> mkvg	vxplex
Display volume group	lsvg	vxprint
Change size of logical volume	extendlv <i>or</i> chlv	vxresize
Manage subdisk or physical volume	chpv	vxsd
Display statistics for storage structures	Choose one of the following: • lspv • lsvg • lslv	vxstat
Manage volume	Choose one of the following: • chlv • mklv • rmlv	vxvol

Troubleshooting and Additional Location Information

The following table includes troubleshooting and additional location information in AIX and Solaris.

Table 11.

Tasks/Locations	AIX Version 5.1.0	Solaris 8
Change a host name	chdev -l inet0 -a hostname=<i>host name</i>	Minimum change required for the following files: • /etc/nodename • /etc/hosts • /etc/hostname.* • /etc/net*/hosts
List of well-known networking services and port numbers	/etc/services	/etc/services
List of well-known protocols	/etc/protocols	/etc/protocols
Provide interface-level packet tracing for Internet protocols	iptrace	snoop
Display network status	netstat	netstat
Display NFS and RPC statistics	nfsstat	nfsstat
Display statistics on network I/O and network CPU usage	netpmon	N/A

Table 11. (continued)

Tasks/Locations	AIX Version 5.1.0	Solaris 8
Display a snapshot of virtual memory	svmon	N/A
Capture and analyze a snapshot of virtual memory	svmon	N/A
Display virtual memory statistics	vmstat	vmstat
Display I/O statistics	iostat <i>or</i> filemon	iostat
Report system activity	sar	sar
Display simple and complex lock contention information	lockstat	N/A
Report CPU usage	tprof or topas	N/A
Simulate a system with different memory sizes for performance testing	rmss	N/A
Display system error log	errpt -a	dmesg
Display/Set dump device	sysdumpdev	N/A
Display paging/swapping space	lsps -a	swap -l
Specify users who have access to cron (Every user has access to cron if the access file does not exist.)	/var/adm/cron/cron.allow	/etc/cron.d/cron.allow
Specify users who have no access to cron	/var/adm/cron/cron.deny	/etc/cron.d/cron.deny
Specify remote users and hosts that can execute commands on the local host	/etc/hosts.equiv	/etc/hosts.equiv
Default superuser log	/var/adm/sulog	/var/adm/sulog
Configure syslogd logging	/etc/syslog.conf	/etc/syslog.conf
Display physical RAM	bootinfo -r <i>or</i> prtconf	prtconf
Back up operating system	mksysb (to tape or file) <i>or</i> mkcd (CD-ROM)	Solstice Backup: nwadmin
Restore operating system	mksysb (to tape or file) <i>or</i> mkcd (CD-ROM)	Choose one Solstice Backup: • nwadmin • nwrecover
Start or stop scripts directory	/etc	/etc/init.d
Devices directory	/dev	/devices

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