Quick Reference: Solaris to AIX
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Use this reference to contrast the AIX Version 4.3.3 and Solaris 8 operating systems. The following tables contrast the structure of 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.

Units	AIX Version 4.3.3	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:
	• App-Dev: Application Development Environment
	• Client:
	  – Pers-Prod
	  – DCE-Client
	  – Media-Defined
		Software configuration clusters, for example:
		• 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.

Tasks	AIX Version 4.3.3	Solaris 8
Install packages	**installp -a** *or* fast path: **smitty install_latest**	**pkgadd**
Display installed packages	**lslpp -L** *or* fast path: **smitty list_installed_sw**	**pkginfo** *or* **pkgparam**
Remove software package	**installp -r** *or* fast path: **smitty reject** **installp -u** *or* fast path: **smitty remove**	**pkgrm**
Verify correct installation	**lppchk** *or* fast path: **smitty check_files**	**pkgchk**
Install a patch	**instfix** *or* fast path: **smitty update_by_fix**	**patchadd**
Remove a patch	**installp -r** *or* fast path: **smitty reject**	**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** *install_dir_path*
Create a boot server for network installation	**smitty nim_config_env**	**setup_install_server -b** *bootdirpath*
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.

Tasks/Locations	AIX Version 4.3.3	Solaris 8
Boot process	Phases: • Read Only Storage (ROS): Check the system mother 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 **/etc/rc.boot** script • Base Device Configuration: Start Configuration Manager to configure base devices • System Boot: Start **init** process phase 2, switch to hard-disk root file system, start other processes defined by records in the **/etc/inittab** file and execute phase 3 of the **/etc/rc.boot** script	Phases: • 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 **/etc/system** file, starts **/sbin/init** program • init: Starts other processes based on the **/etc/inittab** file
Kernel modules directory	Kernel and kernel extension modules are stored in two directories: • **/usr/lib/boot** • **/usr/lib/drivers**	Kernel modules are stored in three directories: • **/platform/sparc/kernel** *or* **/platform/i86pc/kernel** • **/kernel** • **/usr/kernel**
Create and stop processes and services for a current system run level based on the **/etc/inittab** file.	Set the default environment variables as defined in **/etc/rc**.	Set the default environment variables as defined in **/etc/default/init**.
System run levels	Defined run levels: • 0-1: Reserved for future use • 2: Multiuser state with NFS resources shared (default run level) • 3-9: Defined according to the user's preferences • m,M,s,S: Single-user state (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: **init** command to reexamine the **/etc/inittab** file **Note:** When a level from 1 to 9 is specified, the **init** command kills all processes at the current level and restarts any processes associated with the new run level based on the **/etc/inittab** file.	Eight run levels: • 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	**who -r**	**who -r**

Tasks/Locations	AIX Version 4.3.3	Solaris 8
Change a system's run level	**telinit** *level number*	Choose one of the following: • **halt** • **init** • **poweroff** • **reboot** • **shutdown** • **telinit** • **uadmin**
Startup script	**/etc/rc**	**/sbin/rc** *run-level number*
Display boot information	**bootinfo**	N/A
Display or alter the list of boot devices	**bootlist**	**boot**

User Management Tasks

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

Tasks/Locations	AIX Version 4.3.3	Solaris 8
Run multiple tasks in a GUI environment	**smit** (**smitty** in non-GUI) *or* **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** *and* **/etc/security/passwd**	**/etc/passwd** *and* **/etc/shadow**
Group files	**/etc/group** *and* **/etc/security/group**	**/etc/group**
Process resource limits for users	**/etc/securty/limits**	**/etc/system**
Systemwide environment file	**/etc/environment**	N/A
Environment attributes for users	**/etc/security/environ**	N/A
Configuration information for logging into system	**/etc/security/login.cfg**	**/etc/default/login**
Configuration information for user authentication	**/etc/security/login.cfg**	**/etc/pam.conf**
Profile template	**/etc/security/.profile**	**/etc/skel/local.profile**

Device Management and Configuration

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

Tasks	AIX Version 4.3.3	Solaris 8
Run multiple tasks in a GUI environment	**smit** (**smitty** in non-GUI) *or* **wsm**	**admintool**
Configure a device	**cfgmgr**	Choose one of the following: • **drvconfig** • **devlinks** • **disks** • **tapes** • **ports**
Define a device	**mkdev**	Choose one of the following: • **drvconfig** • **devlinks** • **disks** • **tapes** • **ports**
Remove a device	**rmdev**	**rem_drv**
Change a device	**chdev**	N/A
List devices	**lsdev**	**sysdef**
Display device	**lscfg**	**prtconf**

Network Management and Configuration

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

Tasks	AIX Version 4.3.3	Solaris 8
Run multiple tasks in a GUI environment	**smit** (**smitty** in non-GUI) *or* **wsm**	N/A
Configure TCP/IP	**mktcpip**	**ifconfig** *or* **vi /etc/nsswitch.conf**
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**	**cat /etc/nsswitch.conf**

Printer Management and Configuration

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

Tasks	AIX Version 4.3.3	Solaris 8
Run multiple tasks in a GUI environment	smit (smitty in non-GUI) *or* wsm	admintool
Add a printer	mkdev	lpadmin
Start a printer	Start a queue: qadm	enable
Stop a printer	Stop a queue: qadm	disable
Add a printer class	N/A	lpadmin
Display print queue status	lpstat	lpstat
Cancel a print job	qcan	cancel
Add printer queue	Choose one of the following: • mkque • mkquedev • mkvirprt	lpadmin
Change printer queue	Choose one of the following: • chque • chquedev • chvirprt	lpadmin
Remove printer queue	Choose one of the following: • rmque • rmquedev • rmvirprt	lpadmin
Display settings of printer queue	Choose one of the following: • lsque • lsquedev • lsvirprt	lpadmin

File System Management

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

Tasks	AIX Version 4.3.3	Solaris 8
Run multiple tasks in a GUI environment	smit (smitty in non-GUI) *or* 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 *or* mkfs

Tasks	AIX Version 4.3.3	Solaris 8
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 a file system	**lsfs**	**cat /etc/vfstab**

Virtual Disk Management

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

Tasks	AIX Version 4.3.3	Solaris 8
Run multiple tasks in a GUI environment	**smitty chjfs** *or* **wsm**	**metatool**
Expand file system	**chfs** *or* **smitty chjfs**	**growfs**
Delete metadevice	N/A	**metaclear**
Configure metadevice	N/A	**metainit**
Modify metadevice	N/A	**metaparam**
Rename metadevice	N/A	**metarename**
Display status of metadevice	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 4.3.3.

Tasks	AIX Version 4.3.3	Solaris 8
Storage Structure	A *disk* is composed of *physical partitions*. A *physical volume* is the same thing as a *disk*. A *volume group* is composed of *physical volumes*. A *volume group* is divided into *logical volumes*. A *file system* is placed onto a *logical volume*.	A *disk* is composed of *partitions/slices*. A *file system* is placed onto a *partition*. A *subdisk* (somewhat similar to AIX physical partition) is composed of *partitions/slices*. A *plex* (similar to AIX logical partition) is composed of *subdisks*. A *volume* (similar to AIX logical volume) is composed of *plexes*. A *VM disk* is composed of *subdisks*. A *disk group* (similar to AIX volume group) is composed of *VM disks*.

Tasks	AIX Version 4.3.3	Solaris 8
Run multiple tasks in a GUI environment	**smit** (**smitty** in non-GUI) *or* **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**
Set up sysboot information on VM disk	N/A	**vxbootsetup**
Manage VM disks	N/A	**vxdisk**
Create volume group	**mkvg**	**vxdg init**
Remove disk from volume group	**reducevg**	**vxdg rmdisk**
Add disks under volume manager	**extendvg**	**vxdiskadd**
Administer disks	**reducevg** *or* **extendvg**	**vxdiskadm**
Set up disks	**extendvg**	**vxdisksetup**
Change logical volume settings	**chlv**	**vxedit set**
Create configuration records for storage structures	**mkvg** *or* **mklv**	**vxmake**
Manage plexes or volume groups	**chvg** *or* **mkvg**	**vxplex**
Display volume group	**lsvg**	**vxprint**
Change size of volume	**lchangelv**	**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**
Back up operating system	**mksysb** (to tape or file) *or* **mkcd** (CD-ROM)	Solstice Backup: **nwadmin**

Tasks	AIX Version 4.3.3	Solaris 8
Restore operating system	**mksysb** (to tape or file) *or* **mkcd** (CD-ROM)	Choose one Solstice Backup: • **nwadmin** • **nwrecover**

Troubleshooting and Additional Location Information

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

Tasks/Locations	AIX Version 4.3.3	Solaris 8
Change a host name	**chdev -l inet0 -a hostname=***host name*	Minimum change required for the followings 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
Display a snapshot of virtual memory	**svmon**	N/A
Display virtual memory statistics	**vmstat**	**vmstat**
Display I/O statistics	**iostat** *or* **filemon**	**iostat**
Report system activity	**sar**	**sar**
Display simple and complex lock contention information	**lockstat**	N/A
Report CPU usage	**tprof**	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**

Tasks/Locations	AIX Version 4.3.3	Solaris 8
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
Information about mounting local and remote file systems	/etc/filesystems	/etc/vfstab
Display information about the current mounted file systems	mount	mount *or* pg /etc/mnttab
Default superuser log	/var/adm/sulog	/var/adm/sulog
Configure **syslogd** logging	/etc/syslog.conf	/etc/syslog.conf
Display physical RAM	bootinfo -r	prtconf

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