Solaris
Notebook

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Shell commands

Command	Explain
shutdown -y -i5 -g0	Shutdown the machine
shutdown -y -i6 -g0	Restart the machine
At Ok, prompt type: at> boot –s	boot system to single user mode
cat /etc/release	Print Solaris version
prstat	Equivalent to top in linux
who -r	Show current run-level
prtdiag -v	To print hardware diag
useradd, userdel, groupadd	managing user@groups
snoop	Sniffer
prtconf -v uname -i, arch -k	hardware config
format	Display all hard disks in the system
metastat	Information about raid

Add Static Route to Solaris

To add a Static Route you can use the route command to dynamically update the Kernel IP Routing table. However, when a server is restarted, these routes will be lost. To prevent this from happening, add a startup script S76static-routes with all the route commands that needs to persist.

Add a network:

```
# route add net 10.10.10.0 netmask
255.255.255.0 192.168.1.1 1
```

Add a host:

```
# route add host 1.1.1.1 netmask 255.255.255.0
192.168.1.1 1
```

To route traffic through an interface instead of Gateway

```
# route add 1.1.1.1/24 -interface hme0
```

To check that the routing table:

 # netstat -rn

Static Routes at boot time

To make the routes **available at boot time** add all route commands to:

/etc/rc2.d/S76static-routes

and change the permissions to 744 (executable by root)

Solaris Timezone

Timezone defined in /etc/default/init

Add the lines to the file:

TZ=Israel
CMASK=022

to check when the system is going to change:

zdump -v Israel | grep 2009

Check the current time with the command:

date

(and see that you get the right time: IST)

Network card on Solaris

Command	Explain
netstat -rn	Print routing table
ifconfig -a | grep index | awk -F: '!/^lo0/ {print $1}'	Check which device(s) we have: ce0, ce1...
cat /etc/nodename	Check the hostname
cat /etc/netmasks	Check netmasks
/etc/resolv.conf	Configure DNS
/etc/hosts	Configure hosts
/etc/defaultrouter	Configure default gateway
ifconfig ce0 up	Start network card
ifconfig ce0 down	Stop network card
dladm show-dev	show network card devices
dladm show-link	show network card links

Sun Fire v240 – Hard Disk replacement

Remove HD With Solaris Running:

Check that the hard drive you want to remove is visible to the Operating System.
Type:

```
# format
Searching for disks...done

AVAILABLE DISK SELECTIONS:
       0. c0t0d0 <SUN36G cyl 24427 alt 2 hd 27 sec 107>
          /pci@1f,0/pci@1/scsi@8/sd@0,0
       1. c0t1d0 <SUN36G cyl 24427 alt 2 hd 27 sec 107>
          /pci@1f,0/pci@1/scsi@8/sd@1,0
```

Get the correct `Ap_Id` label for the hard drive that you want to remove. Type:

```
# cfgadm -al
Ap_Id              Type         Receptacle   Occupant     Condition
c0                 scsi-bus     connected    configured   unknown
c0::dsk/c0t0d0     CD-ROM       connected    configured   unknown
c1                 scsi-bus     connected    configured   unknown
c1::dsk/c1t0d0     disk         connected    configured   unknown
c1::dsk/c1t1d0     disk         connected    configured   unknown
c2                 scsi-bus     connected    unconfigured unknown
```

Unconfigure the hard drive that you intend to remove.

Use the `unconfigure` command and specify the device you intend to remove. For example, if it is Disk 1, type:

```
# cfgadm -c unconfigure c1::dsk/c1t1d0
```

Verify that the device is now unconfigured. Type:

```
# cfgadm -al
Ap_Id              Type         Receptacle   Occupant      Condition
c0                 scsi-bus     connected    configured    unknown
c0::dsk/c0t0d0     CD-ROM       connected    configured    unknown
c1                 scsi-bus     connected    configured    unknown
c1::dsk/c1t0d0     disk         connected    configured    unknown
c1::dsk/c1t1d0     unavailable  connected    unconfigured  unknown
c2                 scsi-bus     connected    unconfigured  unknown
```

Confirm that the hard drive you want to remove from the server is no longer visible to the operating system. Type:

```
# format
Searching for disks...done

AVAILABLE DISK SELECTIONS:
       0. c0t0d0 <SUN36G cyl 24427 alt 2 hd 27 sec 107>
          /pci@1f,0/pci@1/scsi@8/sd@0,0
```

It is now safe to remove the HD

Install HD With Solaris Running:

```
# format
Searching for disks...done

AVAILABLE DISK SELECTIONS:
       0. c0t0d0 <SUN36G cyl 24427 alt 2 hd 27 sec 107>
          /pci@1f,0/pci@1/scsi@8/sd@0,0
       1. c0t1d0 <SUN36G cyl 24427 alt 2 hd 27 sec 107>
          /pci@1f,0/pci@1/scsi@8/sd@1,0
```

```
# cfgadm -al
Ap_Id              Type         Receptacle   Occupant      Condition
c0                 scsi-bus     connected    configured    unknown
c0::dsk/c0t0d0     CD-ROM       connected    configured    unknown
c1                 scsi-bus     connected    configured    unknown
c1::dsk/c1t0d0     disk         connected    configured    unknown
c1::dsk/c1t1d0     unavailable  connected    unconfigured  unknown
c2                 scsi-bus     connected    unconfigured  unknown
```

In this sample output, the new drive is Disk 1.

Connect the new drive logically to the operating system.

Type the following command, specifying the correct `Ap_Id` label for the disk you have installed. In this sample command the `Ap_Id` label is for Disk 1:

```
# cfgadm -c configure c1::dsk/c1t1d0
```

Confirm that the drive is now connected and configured. Type:

```
# cfgadm -al
Ap_Id              Type         Receptacle   Occupant      Condition
c0                 scsi-bus     connected    configured    unknown
c0::dsk/c0t0d0     CD-ROM       connected    configured    unknown
c1                 scsi-bus     connected    configured    unknown
c1::dsk/c1t0d0     disk         connected    configured    unknown
c1::dsk/c1t1d0     disk         connected    configured    unknown
c2                 scsi-bus     connected    unconfigured  unknown
```

The disk is now available to be mounted for operation.

Solaris duplicate disk (dd) – Method A

Use HD with the same geometry (cylinders, heads, sectors) with the *dd*. In this example I will duplicate boot disk c0t0d0 with c0t1d0 on a Solaris system

 # format

```
Searching for disks...done
AVAILABLE DISK SELECTIONS:
0. c0t0d0 <SUN9.0G cyl 4924 alt 2 hd 27 sec 133>
/sbus@1f,0/SUNW,fas@e,8800000/sd@0,0
1. c0t1d0 <SUN9.0G cyl 4924 alt 2 hd 27 sec 133>
/sbus@1f,0/SUNW,fas@e,8800000/sd@1,0
```

dd if=/dev/rdsk/c0t0d0s2 of=/dev/rdsk/c0t1d0s2 bs=1024k

mkdir /tmp/mnt
mount /dev/dsk/c0t1d0s0 /tmp/mnt
vi /tmp/mnt/etc/vfstab
:%s/c0t0d0/c0t1d0/g
:wq!
umount /tmp/mnt
Test booting from duplicate boot disk:
reboot -- disk1

Solaris duplicate Disk (dd) – Method B

For the purposes of this document:
disk0 is the source (c1t1d0), Disk1 is the clone (c1t2d0)

- Install both disks in system

- Start the machine and in the prompt 'ok' boot the original disk in reconfigure mode (to configure the clone disk). This step can be skipped if you do a 'touch /reconfigure' before you bring the system down to install the second disk
ok boot disk0 -r

- Reboot into single user on the source disk.
ok boot disk0 -s

- dd the source to the clone
dd if=/dev/dsk/c1t1d0s2 of=/dev/dsk/c1t2d0s2 bs=256k

- Verify the clone disk has a clean filesystem
fsck /dev/rdsk/c1t2d0s0

- mount the clone disk
mount /dev/dsk/c1t2d0s0 /mnt

- Change /etc/vfstab to point to the clone device typically this means changing the c1t1nnnn to c1t2nnnn

- touch /reconfigure on the clone to make sure it reconfigs it's devices on next boot
touch /mnt/reconfigure

- Boot clone disk and Verify it works
ok boot disk1 -s

Solaris: Verifing RAID Configuration

metastat - give the information about raid configuration

```
root@OS9:/# metastat

d9: Mirror

    Submirror 0: d19

      State: Okay

    Submirror 1: d29

      State: Okay

    Pass: 1

    Read option: roundrobin (default)

    Write option: parallel (default)

    Size: 64648128 blocks (30 GB)

d19: Submirror of d9

    State: Okay

    Size: 64648128 blocks (30 GB)

    Stripe 0:
```