OM
OM Namah Sivanandaya

Please read http://wwww.kartik.com/VCS101.pdf
THIS DOCUMENT IS AVAILABLE AT HTTP://KARTIK.COM/VCS102.pdf

The combination of Solaris11+VCS 6.0.1 + MySQL 5.6 is not supported it seems. Hence we will install Solaris 10+VCS6.0.1+MySQL 5.6+Apache(latest release)

NOTE: I HAVE USED MySQL 5.5, 5.6 works very well on solaris10, use that!!!

Instructions for installing openfiler are at:
http://kartik.com/VCS101.pdf
Those are for installing on Vmware Workstation 10, it is easy to install it on Oracle VirtualBox, so please do so. This is the first step. VirtualBox is free.

This time I am using virtual box for virtualization.

Instead of downloading the entire Solaris10 image, you may simply download the Solaris 10 Virtualbox template as described below:

http://www.oracle.com/us/downloads/index.html

Select "Solaris 10" → click on it

Accept the license agreement and select:

Click on "Oracle Solaris 10 VM Downloads"

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Oracle Solaris VM Templates
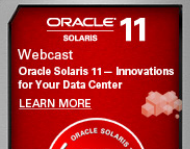
There are 4 distinct types of Oracle Solaris VM Templates. They all facilitate fast installation of Oracle Solaris environments.

- **Oracle VM Templates for Oracle Solaris Zones**
  These templates typically consist of a zone with other Oracle software pre-installed.

- **Oracle VM Templates for SPARC**
  These templates are for guest domains to run on Oracle VM Server for SPARC. They are managed by Oracle VM Manager.

- **Oracle VM Templates for x86**
  These templates are for guest domains to run on Oracle VM Server for x86. They are managed by Oracle VM Manager.

- **Oracle VM Templates for Oracle VM VirtualBox**
  These templates provide virtual machines that run on the popular Oracle VM VirtualBox cross-platform virtualization software. VM VirtualBox runs on x86 desktops and laptops running Windows, Linux, Mac OS X and Oracle Solaris.

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We need:

- **Oracle VM Templates for Oracle VM VirtualBox**
  These templates provide virtual machines that run on the popular Oracle VM VirtualBox cross-platform virtualization software. VM VirtualBox runs on x86 desktops and laptops running Windows, Linux, Mac OS X and Oracle Solaris.

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Oracle VM Templates for Oracle VM VirtualBox

These templates are managed by Oracle VM VirtualBox a cross-platform tool that runs on Windows, Linux, Mac OS X, and Oracle Solaris and supports running Windows, Linux and Oracle Solaris virtual machines.

Thank you for accepting the OTN License Agreement; you may now download this software.

Oracle VM Templates for Oracle VM VirtualBox

Name	Contents	Links
Oracle Solaris 11.1 VirtualBox Template	This Oracle VM VirtualBox template is an Oracle Solaris 11.1 virtual machine providing a convenient way for evaluating the Oracle Solaris 11.1 operating system and development environment on 64 bit x86 systems. The download is 1.7GB.	⬇Download Template Download ReadMe notes
Oracle Solaris 10 1/13 VirtualBox Template	This Oracle VM VirtualBox template is an Oracle Solaris 10 1/13 virtual machine providing a convenient way for evaluating the Oracle Solaris 10 1/13 operating system and development environment on 64 bit x86 systems. The download is 2.1GB.	⬇Download Template Download ReadMe notes

Other Oracle Solaris VM Templates

Oracle VM Templates for x86 and SPARC
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We need:

Oracle Solaris 10 1/13 VirtualBox Template | This Oracle VM VirtualBox template is an Oracle Solaris 10 1/13 virtual machine providing a convenient way for evaluating the Oracle Solaris 10 1/13 operating system and development environment on 64 bit x86 systems.

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Download Oracle VirtualBox:
https://www.virtualbox.org/wiki/Downloads

By downloading, you agree to the terms and conditions of the respective license.

- **VirtualBox platform packages**. The binaries are released under the terms of the GPL version 2.
  - **VirtualBox 4.3.2 for Windows hosts** ⇨x86/amd64

click on the link and download it

Launch Oracle VirtualBox

File – Import Appliance
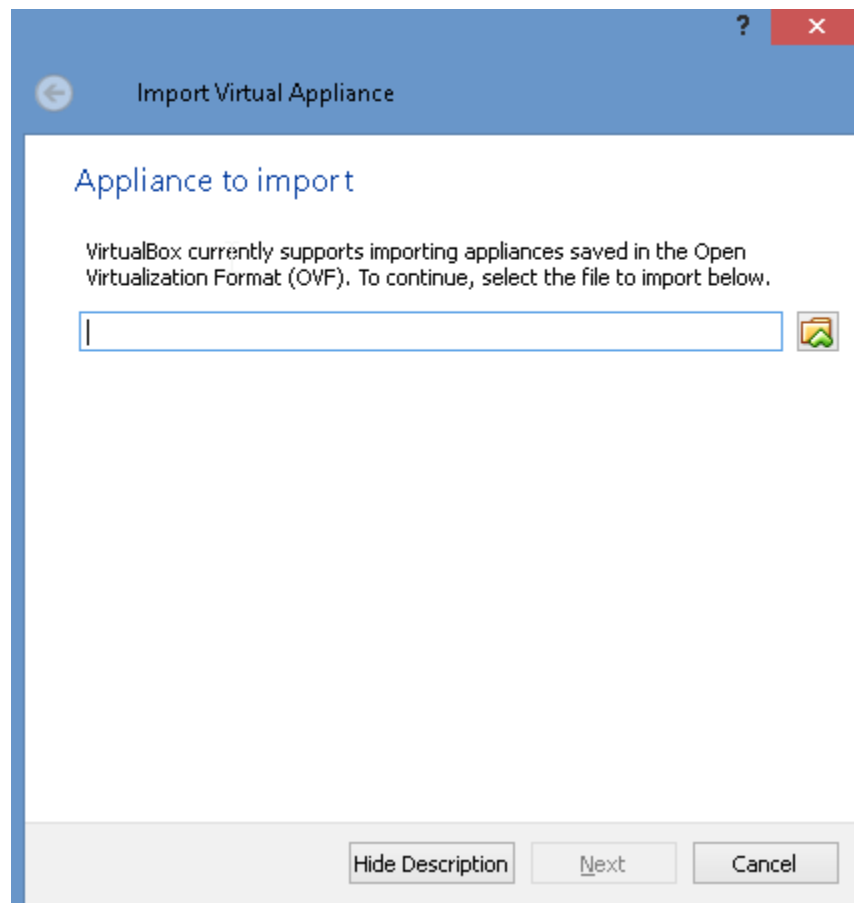
Browse to the location of the template you downloaded.

Oracle VM VirtualBox Manager

File   Machine   Help

New   Settings   Start   Discard

Details   Snapshots

? ×

Import Virtual Appliance

Appliance settings

These are the virtual machines contained in the appliance and the suggested settings of the imported VirtualBox machines. You can change many of the properties shown by double-clicking on the items and disable others using the

Importing Appliance ...: Importing appliance 'C:\Users\k...   ×

Importing virtual disk image 'Solaris10_1-13-disk1.vmdk' ... (2/3)

17% ✗

3 minutes remaining

▲ ◇ Hard Disk Controller (IDE)   PIIX4

🖭 Virtual Disk Image   C:\Users\kartik\VirtualBox VM...

☐ Reinitialize the MAC address of all network cards

Restore Defaults   Import   Cancel

y now because you haven't

Disable USB 2.0 (EHCI)Controller
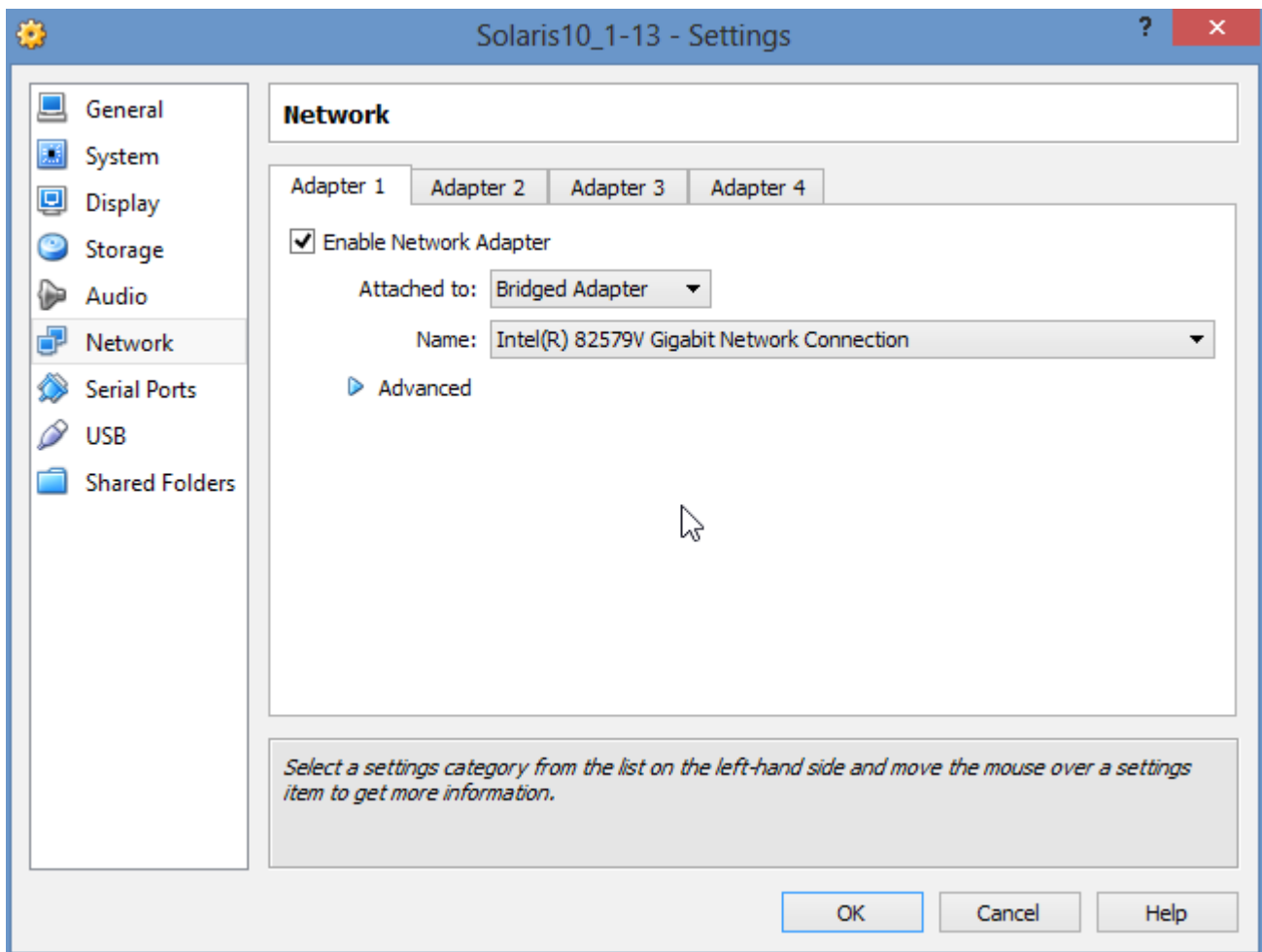
Please change Adapter 1 to "Bridged Adapter" Click on Adapter 2 after doing that.
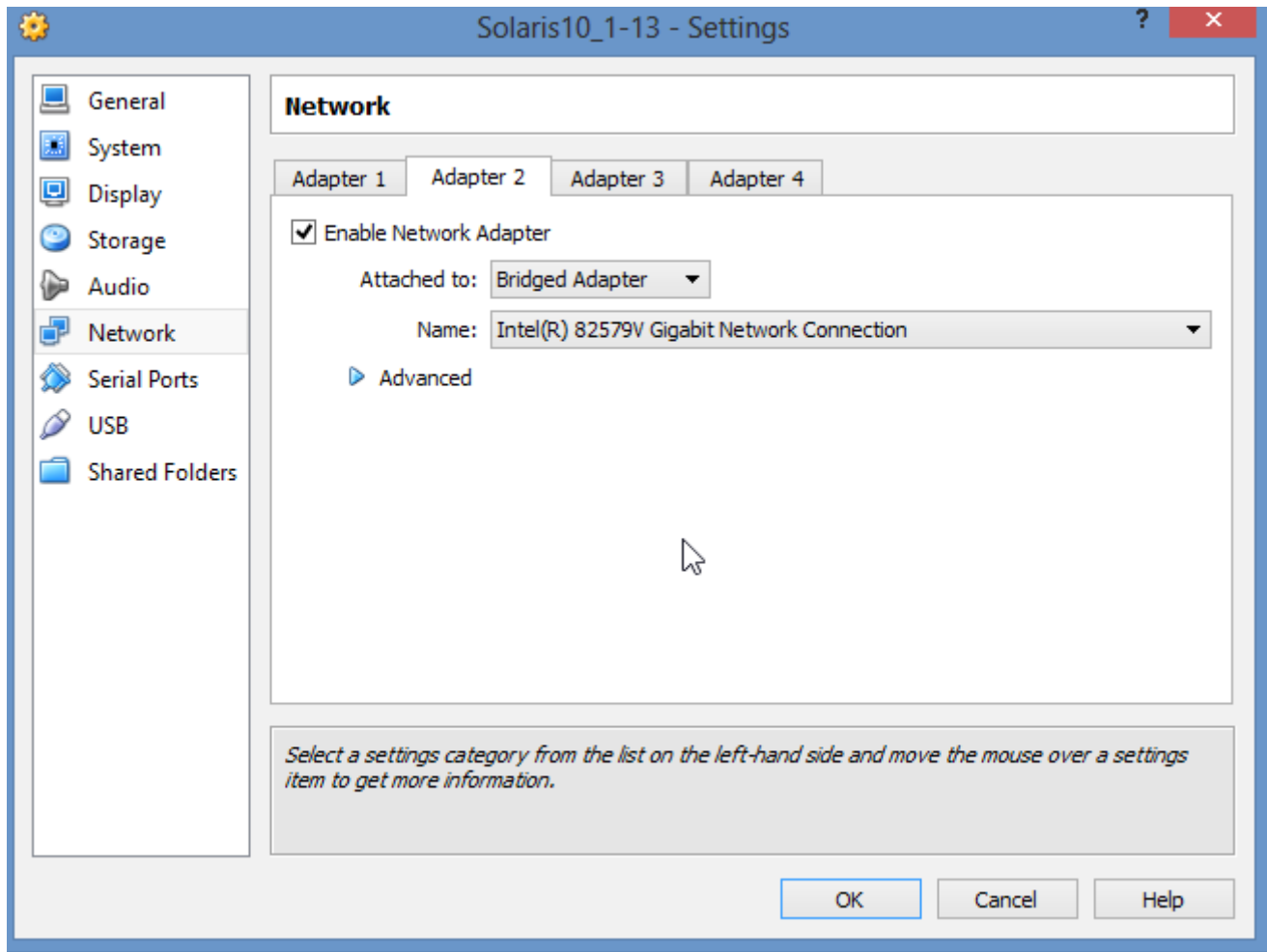
Similarly for Adapter 3
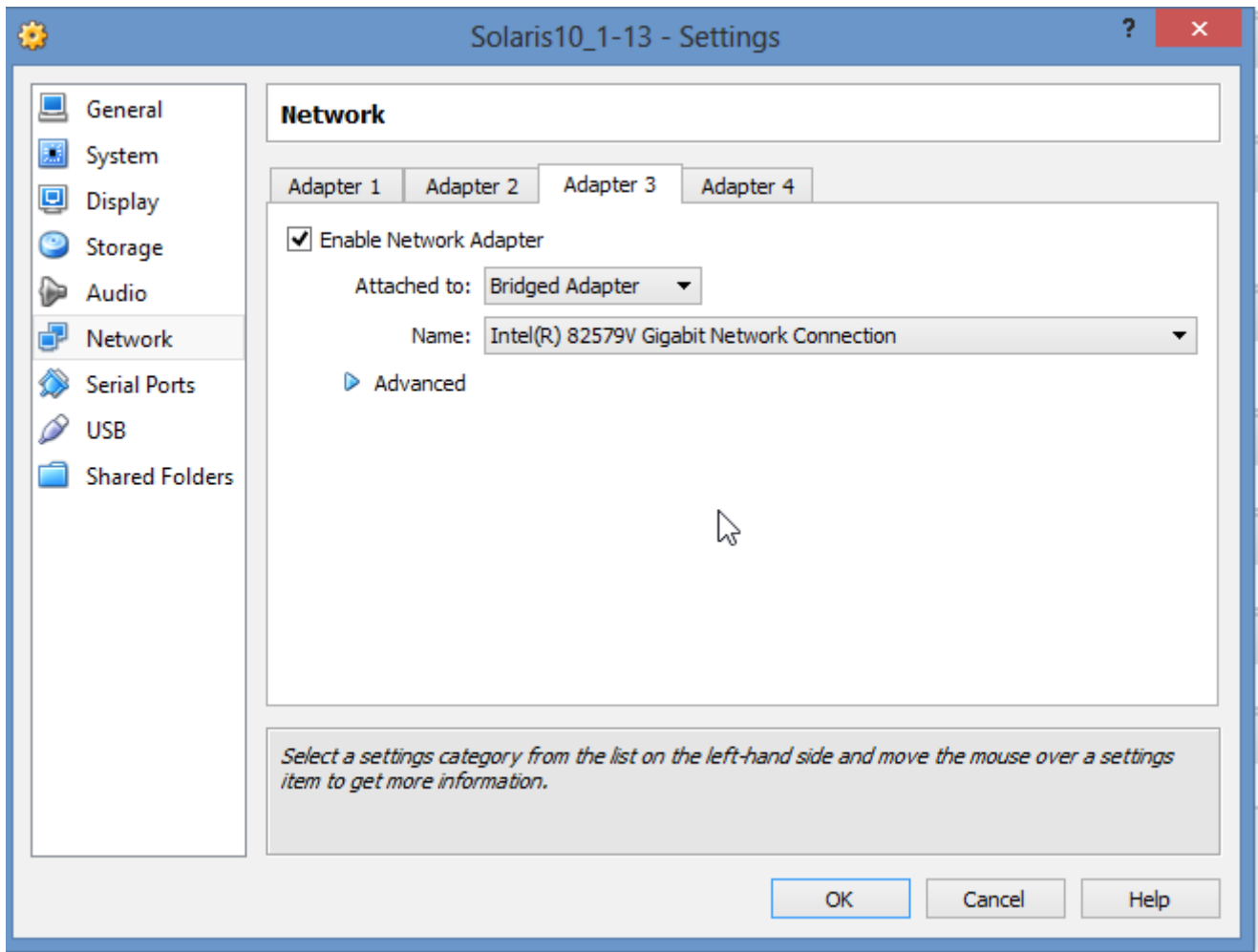
Click "OK"

SIMILARLY FOR CREATING THE THE SECOND NODE, IMPORT APPLIANCE AGAIN AND DO IT.

```
Primary Network Interface

On this screen you must specify which of the following network adapters is
the system's primary network interface.  Usually the correct choice is the
lowest number.  However, do not guess; ask your system administrator if
you're not sure.

> To make a selection, use the arrow keys to highlight the option and
  press Return to mark it [X].


    Primary network interface
    -------------------------
    [X] e1000g0
    [ ] e1000g1
    [ ] e1000g2




    Esc-2_Continue      Esc-6_Help
```
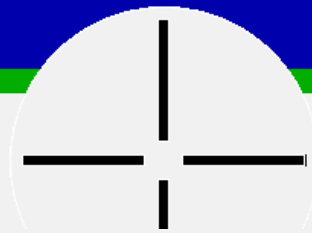
only select e1000g0

```
Confirm Information for e1000g0

> Confirm the following information.  If it is correct, press F2;
  to change any information, press F4.


                         Networked: Yes
            Primary network interface: e1000g0
          Secondary network interfaces: e1000g1, e1000g2
                          Use DHCP: No
                          Host name: solaris10-1
                         IP address: 10.0.0.41
            System part of a subnet: Yes
                            Netmask: 255.255.255.0
                       Enable IPv6: No
                     Default Route: Specify one
                  Router IP Address: 10.0.0.1




    Esc-2_Continue     Esc-4_Change     Esc-6_Help
```

```
DHCP for e1000g1

Specify whether or not this network interface should use DHCP to configure
itself.  Choose Yes if DHCP is to be used, or No if the network interface is
to be configured manually.

NOTE: DHCP support will not be enabled, if selected, until after the system
reboots.

    Use DHCP for e1000g1
    --------------------
    [ ] Yes
    [X] No




    Esc-2_Continue     Esc-6_Help
```

```
Confirm Information for e1000g1

> Confirm the following information.  If it is correct, press F2;
  to change any information, press F4.


                          Use DHCP: No
                         Host name: solaries10-1-private-1
                        IP address: 13.13.13.13
          System part of a subnet: Yes
                           Netmask: 255.255.255.0
                       Enable IPv6: No
                     Default Route: None









    Esc-2_Continue      Esc-4_Change      Esc-6_Help
_
```

```
Name Service

On this screen you must provide name service information.  Select the name
service that will be used by this system, or None if your system will either
not use a name service at all, or if it will use a name service not listed
here.

> To make a selection, use the arrow keys to highlight the option
  and press Return to mark it [X].


    Name service
    ------------
    [ ] NIS+
    [ ] NIS
    [X] DNS
    [ ] LDAP
    [ ] None







    Esc-2_Continue      Esc-6_Help
```

```
Confirm Information

> Confirm the following information.  If it is correct, press F2;
  to change any information, press F4.


                Name service: DNS
                 Domain name: comcast.net
         Server address(es): 10.0.0.1
          Search domain(s): comcast.net




   Esc-2_Continue     Esc-4_Change     Esc-6_Help
```
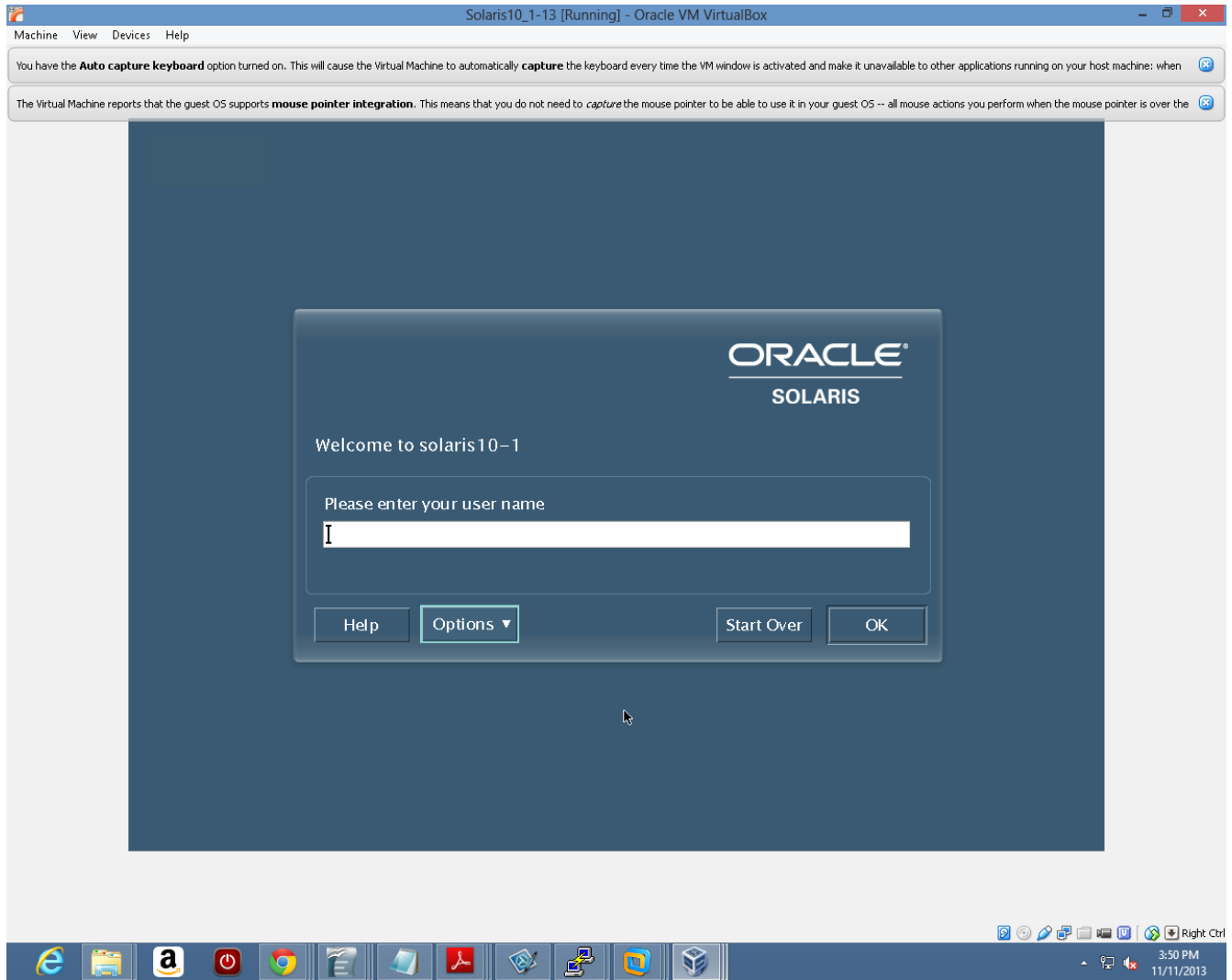
```
Name Service Error

Unable to find an address entry for solaris10-1 with the specified DNS
configuration.


    Enter new name service information?
    -----------------------------------
    [ ] Yes
    [X] No




   Esc-2_Continue     Esc-6_Help
```
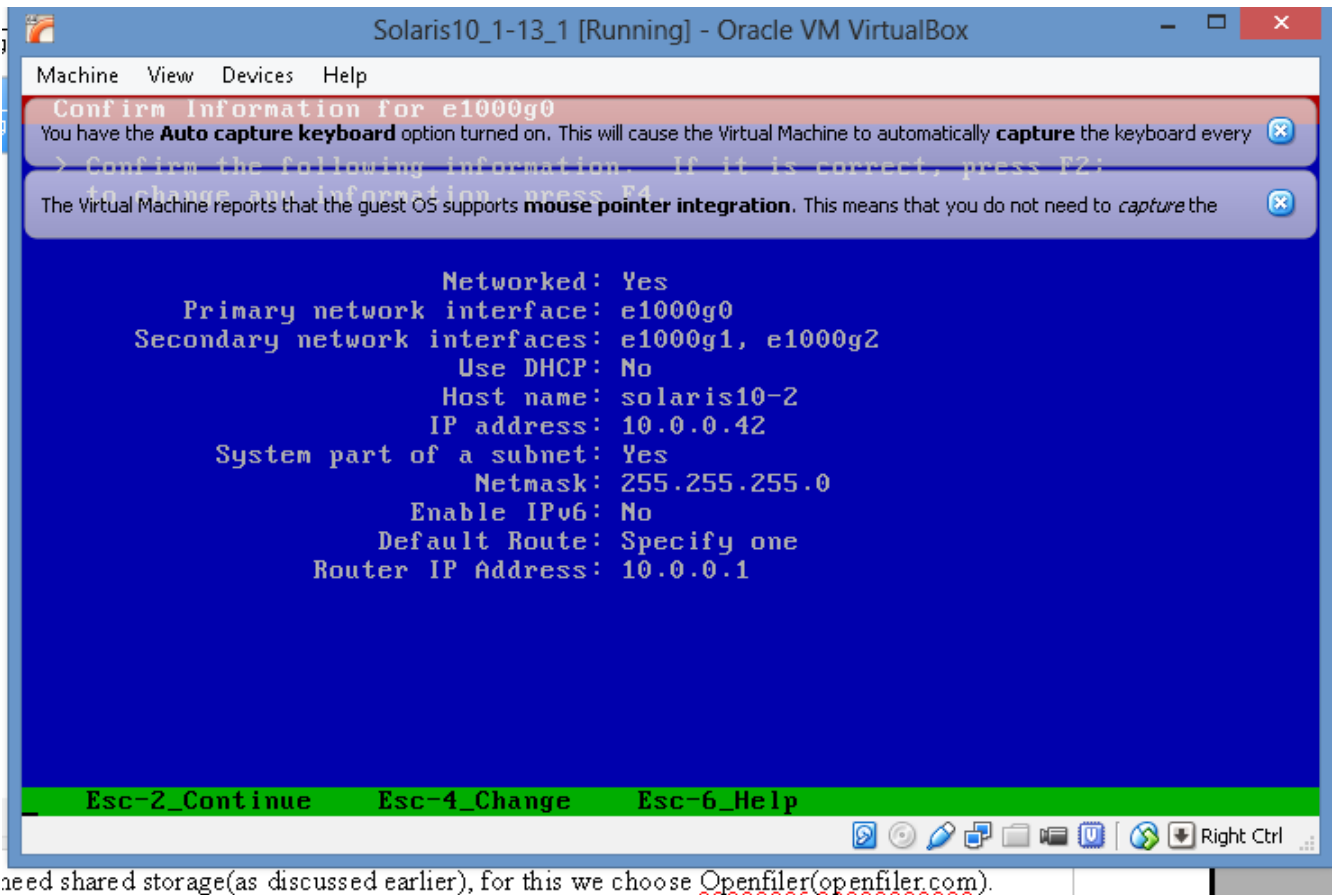
CONFIGURING THE SECOND SYSTEM(SECOND VIRTUAL MACHINE)

Solaris10_1-13_1 [Running] - Oracle VM VirtualBox

Machine View Devices Help

Confirm Information for e1000g0
You have the **Auto capture keyboard** option turned on. This will cause the Virtual Machine to automatically **capture** the keyboard every

The Virtual Machine reports that the guest OS supports **mouse pointer integration**. This means that you do not need to *capture* the

```
                       Networked: Yes
        Primary network interface: e1000g0
    Secondary network interfaces: e1000g1, e1000g2
                        Use DHCP: No
                       Host name: solaris10-2
                      IP address: 10.0.0.42
        System part of a subnet: Yes
                         Netmask: 255.255.255.0
                     Enable IPv6: No
                   Default Route: Specify one
               Router IP Address: 10.0.0.1
```

    Esc-2_Continue   Esc-4_Change   Esc-6_Help

Right Ctrl

need shared storage(as discussed earlier), for this we choose Openfiler(openfiler.com).

ETC

putty into the two systems after enabling root login in /etc/default/login(commenting out CONSOLE) and by changing PermitRootLogin yes in /etc/ssh/sshd_config and restarting ssh (svcadm restart ssh) scp over the VCS package. You may do this on any node.

```
bash-3.2# pwd
/var/tmp
bash-3.2# ls -al
total 2791377
drwxrwxrwt   5 root   sys         10 Nov 11 18:09 .
drwxr-xr-x  46 root   sys         46 Nov 11 17:48 ..
prw-------   1 root   root         0 Nov 11 17:49 .sysidtool_in
prw-------   1 root   root         0 Nov 11 17:49 .sysidtool_out
-rw-r--r--   1 root   root         3 Nov 11 17:35 .sysidtool_pid
-rw-r--r--   1 root   root  1428049920 Nov  8 17:30 VRTS_SF_HA_Solutions_6.0.1_Solaris_x64.tar
drwxr-xr-x   4 root   root         4 Aug  3  2012 dvd2-sol_x64
drwx------   2 root   root         2 Jan 22  2013 gconfd-root
srwxr-xr-x   1 root   root         0 Jan 22  2013 mapping-root
drwx------   2 root   root        19 Jan 22  2013 orbit-root
```

```
gzip -d
tar xvf VRTS......

bash-3.2# cd dvd2-sol_x64/
bash-3.2# ls -al
total 12
drwxr-xr-x   4 root    root         4 Aug  3  2012 .
drwxrwxrwt   5 root    sys         10 Nov 11 18:09 ..
drwxr-xr-x  17 root    root        20 Aug  3  2012 sol10_x64
drwxr-xr-x  17 root    root        20 Aug  3  2012 sol11_x64
bash-3.2# cd sol10_x64/
bash-3.2# ls -al
total 105
drwxr-xr-x  17 root    root        20 Aug  3  2012 .
drwxr-xr-x   4 root    root         4 Aug  3  2012 ..
drwxrwxr-x   4 root    root         7 Aug  3  2012 cluster_server
-rw-r--r--   1 root    root       860 Aug  3  2012 copyright
drwxrwxr-x  10 root    root        14 Aug  3  2012 docs
drwxrwxr-x   3 root    root         6 Aug  3  2012 dynamic_multipathing
drwxrwxr-x   3 root    root         6 Aug  3  2012 file_system
-rwxr-xr-x   1 root    root      6316 Jul 24  2012 installer
drwxrwxr-x   4 root    root         4 May  7  2012 perl
drwxrwxr-x   2 root    root        29 Aug  3  2012 pkgs
drwxrwxr-x   7 root    root        18 Aug  3  2012 scripts
drwxrwxr-x   4 root    root         7 Aug  3  2012 storage_foundation
drwxrwxr-x   4 root    root         7 Aug  3  2012 storage_foundation_cluster_file_system_ha
drwxrwxr-x   4 root    root         7 Aug  3  2012 storage_foundation_for_oracle_rac
drwxrwxr-x   4 root    root         7 Aug  3  2012 storage_foundation_high_availability
drwxrwxr-x   3 root    root         6 Aug  3  2012 virtualstore
drwxrwxr-x   3 root    root         6 Aug  3  2012 volume_manager
-rwxr-xr-x   1 root    root     18325 Jul 24  2012 webinstaller
drwxrwxr-x   2 root    root         3 Aug  3  2012 windows
drwxrwxr-x   4 root    root         4 Jul 24  2012 xprtl
bash-3.2#
```

bash-3.2# echo "10.0.0.42 solaris10-2" >> /etc/hosts

AND ON THE OTHER NODE

bash-3.2# echo "10.0.0.41 solaris10-1" >> /etc/hosts

So that both nodes have the hostnames of each other.

BACK TO NODE1

bash-3.2# ./installer

This procedure has already been documented in http://kartik.com/VCS101.pdf

INSTALL HA SOLARIS 10 ZONE

after all is done
hagrp -add testgrp
VCS WARNING V-16-1-11335 Configuration must be ReadWrite : Use haconf -makerw
bash-3.2# haconf -makerw
bash-3.2# hagrp -add testgrp
VCS NOTICE V-16-1-10136 Group added; populating SystemList and setting the Parallel attribute
recommended before adding resources
bash-3.2# hagrp -modify testgrp Parallel 0
bash-3.2# hagrp -modify testgrp SystemList solaris10-1 0 solaris10-2 1
bash-3.2# hagrp -modify testgrp AutoStartList solaris10-1
bash-3.2# hares -add vcspool Zpool testgrp
VCS NOTICE V-16-1-10242 Resource added. Enabled attribute must be set before agent monitors
bash-3.2# hares -modify vcspool Critical 1
bash-3.2# hares -modify vcspool ChkZFSMounts 1
bash-3.2# hares -modify vcspool FailMode continue
bash-3.2# hares -modify vcspool ForceOpt 1
bash-3.2# hares -modify vcspool ForceRecoverOpt 0
bash-3.2# hares -modify vcspool PoolName spool
bash-3.2# hares -modify vcspool AltRootPath /
bash-3.2# hares -modify vcspool ZoneResName vcszone
bash-3.2# hares -modify vcspool Enabled 1
bash-3.2# hazonesetup -g testgrp -r vcszone -z testzone -u admin -p password -a -s solaris10-1,solaris10-2
V-16-34-1107 Group testgrp is already present
VCS WARNING V-16-1-10563 Key solaris10-1 already in list.
VCS WARNING V-16-1-10563 Key solaris10-1 already in list.
VCS WARNING V-16-1-10563 Key solaris10-2 already in list.
V-16-34-1119 User admin already present
VCS ERROR V-16-1-11332 Invalid credentials, unable to create halogin session

If you see this message: VCS ERROR V-16-1-11332 Invalid credentials, unable to create halogin session

Then, edit the zone's /etc/hosts file and verify/add this:

127.0.0.1 localhost logost
10.0.0.45 testzone
10.0.0.41 solaris10-1

10.0.0.42 solaris10-2

try the command again

bash-3.2# hazonesetup -g testgrp -r vcszone -z testzone -u admin -p password -a -s solaris10-1,solaris10-2
V-16-34-1107 Group testgrp is already present
VCS WARNING V-16-1-10563 Key solaris10-1 already in list.
VCS WARNING V-16-1-10563 Key solaris10-1 already in list.
VCS WARNING V-16-1-10563 Key solaris10-2 already in list.
VCS WARNING V-16-1-10563 Key solaris10-2 already in list.
V-16-34-1114 Resource vcszone already present
V-16-34-1119 User admin already present
V-16-34-1120 User admin is already GroupAdministrator
bash-3.2# hares -link vcszone vcspool
bash-3.2# haconf -dump
bash-3.2# cd /etc/zones
bash-3.2# ls -al
total 34
drwxr-xr-x   2 root   sys   8 Nov 11 19:09 .
drwxr-xr-x 93 root   sys   262 Nov 11 19:06 ..
-r--r--r--   1 root   bin   392 Aug 8 2007 SUNWblank.xml
-r--r--r--   1 root   bin   562 Aug 8 2007 SUNWdefault.xml
-r--r--r--   1 root   bin   402 Jun 20 2007 SUNWlx.xml
-r--r--r--   1 root   bin   777 Mar 11 2008 SUNWtsoldef.xml
-rw-r--r--   1 root   sys   361 Nov 11 19:09 index
-rw-r--r--   1 root   root   342 Nov 11 18:55 testzone.xml
bash-3.2# scp testzone.xml solaris10-2:/etc/zones
scp index solaris10-2:/etc/zones

ON solaris10-2(NODE2) Edit the index file so that it looks like this:
global:installed:/
testzone:configured:/spool/mnt/testzone:

ON NODE 1
zoneadm -z testzone halt
zpool export spool

do a hastatus -sum

If you see any resporces failed, do a
hares -clear <failed resoource> -sys <system name>
For example

hares -clear vcszone -sys solaris10-1
hares -clear vcszone -sys solaris10-2

Now, switch the zone to NODE2

hagrp -switch vcszone -to solaris10-2

Now, run the command:
hazonesetup -g testgrp -r vcszone -z testzone -u admin -p password -a -s solaris10-1,solaris10-2

You should not get any errors

ON THE ZONE:
zlogin testzone

edit /etc/default/login and comment out the line with CONSOLE, it should look like this:
#CONSOLE=/dev/console
edit /etc/sshd/sshd_config and permit root to ssh directly, by changing "no" to "yes"
PermitRootLogin yes
restart ssh
svcadm restart ssh

NOW WE CAN PUTTY TO THE ZONE WHENEVER WE LIKE

SWITCH THE ZONE BACK TO NODE 1
hagrp -switch testgrp -to solaris10-1

do
hastatus -sum
hastatus -sum
hastatus -sum
again and again: OBSERVE THE RESULTS

NOTE OPEN ANOTHER PUTTY SESSION ON NODE 1 AND WATCH THE PROGRESS BY
DOING A

tail -f /var/VRTSvcs/log/engine_A.log

ONCE THE ZONE IS ONLINE, you will see TESTGRP IN online STATE

NOW DOWNLOAD THE MySql community edition server for Solaris 10
scp the file to /var/tmp on the zone

NOW LOGIN TO THE ZONE

Create a mysql user and group
groupadd mysql
useradd -m /var/tmp/mysql -d -s /bin/bash -g mysql mysql

bash-3.2# pwd
/var/tmp
bash-3.2# ls -al
./.sysidtool_out: Checksum failure
./.sysidtool_in: Checksum failure
./.sysidtool_pid: Checksum failure
total 906611
drwxrwxrwt   2 root   sys   6 Nov 11 20:01 .
drwxr-xr-x 44 root   sys   44 Nov 11 19:15 ..
-rw-r--r--   1 root   root   463808344 Nov 10 09:44 mysql-5.5.34-solaris10-x86_64.pkg.gz
bash-3.2# gzip -d mysql-5.5.34-solaris10-x86_64.pkg.gz

bash-3.2# pkgadd -d mysql-5.5.34-solaris10-x86_64.pkg

The following packages are available:
  1 mysql   MySQL Community Server (GPL)
            (i86pc) 5.5.34

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:

do this:

chown -R mysql:mysql /opt/mysql
chown -R mysql:mysql /var/lib/mysql

After successful install try starting mysql on the zone(if it works on the zone then we can put it under
cluster control!!!!!)

su – mysql

EDIT /opt/mysql/mysql/my.cnf

http://dev.mysql.com/doc/refman/5.5/en/server-configuration-defaults.html

[mysqld]

Remove leading # and set to the amount of RAM for the most important data
cache in MySQL. Start at 70% of total RAM for dedicated server, else 10%.
innodb_buffer_pool_size = 128M

Remove leading # to turn on a very important data integrity option: logging
changes to the binary log between backups.
log_bin

# These are commonly set, remove the # and set as required.
 basedir = /opt/mysql/mysql
 datadir = /opt/mysql/mysql/data
 port = 3306
# server_id = ...
 socket = /tmp/mysql.sock

Remove leading # to set options mainly useful for reporting servers.
The server defaults are faster for transactions and fast SELECTs.
Adjust sizes as needed, experiment to find the optimal values.
join_buffer_size = 128M
sort_buffer_size = 2M
read_rnd_buffer_size = 2M

sql_mode=NO_ENGINE_SUBSTITUTION,STRICT_TRANS_TABLES
##end of file##########################

mkdir /opt/mysql/mysql/data

cd /opt/mysql/myql/bin

./mysqld_safe &
NOTE the PID of the process(we have to kill it later)

also do this:
tail -f /opt/mysql/mysql/data/testzone.err

NOTE errors if any

YOU MIGHT SEE THIS ERROR MESSAGE:
Fatal error: Can't open and lock privilege tables: Table 'mysql.host' doesn't exist
OR
Fatal error: Can't open and lock privilege tables: Table 'mysql.host' doesn't exist

Open another putty session on the zone
login as root
su – mysql
cd /opt/mysql/mysql/
So we have to do this:
./scripts/mysql_install_db –user=mysql –ldata=/opt/mysql/mysql/data

kill all mysql processes and restart
./mysqld_safe &

NOTE: PLEASE WATCH THE OUTPUT OF tail -f /opt/mysql/mysql/data/testzone.err IN THE
PREVIOUS PUTTY SESSION, DOES IT GIVE ANY ERRORS?

CONTACT ME AT kartik.unix@gmail.com if you are getting errors

ON EACH NODE INSTALL THE ACC LIBRARY PACKAGE

To install the ACC library
1 Log in as superuser.
2 Download ACC Library.
You can download either the complete Agent Pack tar file or the individual
ACCLib tar file from the Symantec Operations Readiness Tools (SORT) site
(https://sort.symantec.com/agents).

Also, while you're at it download the MySQL agent

SCP BOTH AGENTS TO BOTH NODES

NODE1
bash-3.2# ls -al /var/tmp
total 2794224
drwxrwxrwt   5 root   sys   13 Nov 11 19:59 .
drwxr-xr-x 51 root   sys   51 Nov 11 18:27 ..
prw-------   1 root   root   0 Nov 11 17:49 .sysidtool_in
prw-------   1 root   root   0 Nov 11 17:49 .sysidtool_out
-rw-r--r--   1 root   root   3 Nov 11 17:35 .sysidtool_pid
-rw-r--r--   1 root   root   396067 Nov 10 18:00 HA_ag_acc_library_5.2.4.0_VCS6.0_Solaris_x86-64.tar.gz
-rw-r--r--   1 root   root   838740 Nov 10 17:59 HA_ag_mysql_agent_5.1.2.0_VCS6.0_Solaris_x86-64.tar.gz
-rw-r--r--   1 root   root   1428049920 Nov 8 17:30 VRTS_SF_HA_Solutions_6.0.1_Solaris_x64.tar
drwxr-xr-x   4 root   root   4 Aug 3 2012 dvd2-sol_x64
drwx------   2 root   root   2 Jan 22 2013 gconfd-root
srwxr-xr-x   1 root   root   0 Jan 22 2013 mapping-root
drwx------   2 root   root   19 Jan 22 2013 orbit-root
-rw-r--r--   1 root   other   698 Nov 11 19:08 vpvd.SunOS.solaris10-1

```
bash-3.2# cd /var/tmp
bash-3.2# scp HA_ag_acc_library_5.2.4.0_VCS6.0_Solaris_x86-64.tar.gz solaris10-2:/var/tmp
Password:
HA_ag_acc_library_5. 100% |
*****************************************************************************
*********************| 386 KB   00:00
bash-3.2# gzip -d HA_ag_acc_library_5.2.4.0_VCS6.0_Solaris_x86-64.tar.gz
bash-3.2# ls -al
total 2793196
drwxrwxrwt   5 root    sys          13 Nov 11 20:19 .
drwxr-xr-x  51 root    sys          51 Nov 11 18:27 ..
prw-------   1 root    root          0 Nov 11 17:49 .sysidtool_in
prw-------   1 root    root          0 Nov 11 17:49 .sysidtool_out
-rw-r--r--   1 root    root          3 Nov 11 17:35 .sysidtool_pid
-rw-r--r--   1 root    root     542720 Nov 10 18:00 HA_ag_acc_library_5.2.4.0_VCS6.0_Solaris_x86-
64.tar
-rw-r--r--   1 root    root     838740 Nov 10 17:59 HA_ag_mysql_agent_5.1.2.0_VCS6.0_Solaris_x86-
64.tar.gz
-rw-r--r--   1 root    root   1428049920 Nov  8 17:30 VRTS_SF_HA_Solutions_6.0.1_Solaris_x64.tar
drwxr-xr-x   4 root    root          4 Aug  3 2012 dvd2-sol_x64
drwx------   2 root    root          2 Jan 22 2013 gconfd-root
srwxr-xr-x   1 root    root          0 Jan 22 2013 mapping-root
drwx------   2 root    root         19 Jan 22 2013 orbit-root
-rw-r--r--   1 root    other       698 Nov 11 19:08 vpvd.SunOS.solaris10-1
bash-3.2# tar xvf HA_ag_acc_library_5.2.4.0_VCS6.0_Solaris_x86-64.tar
x ., 0 bytes, 0 tape blocks
x ./docs, 0 bytes, 0 tape blocks
x ./docs/acclib_install.pdf, 455474 bytes, 890 tape blocks
x ./pkgs, 0 bytes, 0 tape blocks
x ./pkgs/VRTSacclib.pkg, 73728 bytes, 144 tape blocks
bash-3.2# ls -al
total 2794484
drwxr-xr-x   7 root    root         15 Sep 27 04:59 .
drwxr-xr-x  51 root    sys          51 Nov 11 18:27 ..
prw-------   1 root    root          0 Nov 11 17:49 .sysidtool_in
prw-------   1 root    root          0 Nov 11 17:49 .sysidtool_out
-rw-r--r--   1 root    root          3 Nov 11 17:35 .sysidtool_pid
-rw-r--r--   1 root    root     542720 Nov 10 18:00 HA_ag_acc_library_5.2.4.0_VCS6.0_Solaris_x86-
64.tar
-rw-r--r--   1 root    root     838740 Nov 10 17:59 HA_ag_mysql_agent_5.1.2.0_VCS6.0_Solaris_x86-
64.tar.gz
-rw-r--r--   1 root    root   1428049920 Nov  8 17:30 VRTS_SF_HA_Solutions_6.0.1_Solaris_x64.tar
drwxrwxr-x   2 root    root          3 Sep 27 04:59 docs
drwxr-xr-x   4 root    root          4 Aug  3 2012 dvd2-sol_x64
drwx------   2 root    root          2 Jan 22 2013 gconfd-root
srwxr-xr-x   1 root    root          0 Jan 22 2013 mapping-root
drwx------   2 root    root         19 Jan 22 2013 orbit-root
drwxrwxr-x   2 root    root          3 Sep 27 04:59 pkgs
-rw-r--r--   1 root    other       698 Nov 11 19:08 vpvd.SunOS.solaris10-1
```

bash-3.2#

bash-3.2# cd pkgs
bash-3.2# ls -al
total 169
drwxrwxr-x   2 root   root   3 Sep 27 04:59 .
drwxr-xr-x   8 root   root   16 Nov 11 20:21 ..
-rwxr-xr-x   1 root   root   73728 Sep 9 2010 VRTSacclib.pkg
bash-3.2# pkgadd -d VRTSacclib.pkg

The following packages are available:
  1 VRTSacclib   Veritas Cluster Server ACC Library by Symantec
                 (i386) 5.2

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:
Verifying package <VRTSacclib> dependencies in zone <testzone>
WARNING: setting mode of </opt/VRTS/.ACCLib> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/compat> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/network> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/system> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/vcs> to default mode (755)

The package <VRTSacclib> contains scripts which will be executed on
zone <testzone> with super-user permission during the process of
installing this package.

Do you want to continue with the installation of <VRTSacclib> [y,n,?] y

Processing package instance <VRTSacclib> from </var/tmp/pkgs/VRTSacclib.pkg>
Installing package <VRTSacclib> in global zone

Veritas Cluster Server ACC Library by Symantec(i386) 5.2
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in FAR 12.212 and subject to restricted rights as defined in FAR Section
52.227-19 "Commercial Computer Software - Restricted Rights" and DFARS
227.7202, "Rights in Commercial Computer Software or Commercial Computer
Software Documentation", as applicable, and any successor regulations.
Any use, modification, reproduction release, performance, display or
disclosure of the Licensed Software and Documentation by the U.S.
Government shall be solely in accordance with the terms of this
Agreement.
Using </> as the package base directory.
Processing package information.
Processing system information.

WARNING: setting mode of </opt/VRTS/.ACCLib> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/compat> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/network> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/system> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/vcs> to default mode (755)
   4 package pathnames are already properly installed.
Verifying package dependencies.
Verifying disk space requirements.
Checking for conflicts with packages already installed.
Checking for setuid/setgid programs.

This package contains scripts which will be executed with super-user
permission during the process of installing this package.

Do you want to continue with the installation of <VRTSacclib> [y,n,?] y

Installing Veritas Cluster Server ACC Library by Symantec as <VRTSacclib>

Installing part 1 of 1.
opt/VRTS/.ACCLib/compat/ag_i18n_inc_v35.pm
opt/VRTS/.ACCLib/network/Comms.pm
opt/VRTS/.ACCLib/system/Arch.pm
opt/VRTS/.ACCLib/system/Lock.pm
opt/VRTS/.ACCLib/system/Proc.pm
opt/VRTS/.ACCLib/system/Sys.pm
opt/VRTS/.ACCLib/vcs/Group.pm
opt/VRTS/.ACCLib/vcs/Hagrp.pm
opt/VRTS/.ACCLib/vcs/Hares.pm
opt/VRTS/.ACCLib/vcs/Hasys.pm
opt/VRTS/.ACCLib/vcs/Hatype.pm
opt/VRTS/.ACCLib/vcs/LogInt.pm
opt/VRTS/.ACCLib/vcs/Resource.pm
opt/VRTS/.ACCLib/vcs/VCSDefines.pm
opt/VRTS/.ACCLib/vcs/VCSHighLevel.pm
opt/VRTS/.ACCLib/vcs/VCSType.pm
opt/VRTS/.ACCLib/vcs/VCSagentFW.pm
opt/VRTS/.ACCLib/vcs/Version.pm
opt/VRTS/messages/en/VRTSvcsSunVRTSacclib.bmc
918 blocks
Executing postinstall script.

Installation of <VRTSacclib> was successful.
Installing package <VRTSacclib> in zone <testzone>

Veritas Cluster Server ACC Library by Symantec(i386) 5.2
Using </> as the package base directory.
Processing package information.
Processing system information.
WARNING: setting mode of </opt/VRTS/.ACCLib> to default mode (755)

WARNING: setting mode of </opt/VRTS/.ACCLib/compat> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/network> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/system> to default mode (755)
WARNING: setting mode of </opt/VRTS/.ACCLib/vcs> to default mode (755)
    4 package pathnames are already properly installed.

Installing Veritas Cluster Server ACC Library by Symantec as <VRTSacclib>

Installing part 1 of 1.
opt/VRTS/.ACCLib/compat/ag_i18n_inc_v35.pm
opt/VRTS/.ACCLib/network/Comms.pm
opt/VRTS/.ACCLib/system/Arch.pm
opt/VRTS/.ACCLib/system/Lock.pm
opt/VRTS/.ACCLib/system/Proc.pm
opt/VRTS/.ACCLib/system/Sys.pm
opt/VRTS/.ACCLib/vcs/Group.pm
opt/VRTS/.ACCLib/vcs/Hagrp.pm
opt/VRTS/.ACCLib/vcs/Hares.pm
opt/VRTS/.ACCLib/vcs/Hasys.pm
opt/VRTS/.ACCLib/vcs/Hatype.pm
opt/VRTS/.ACCLib/vcs/LogInt.pm
opt/VRTS/.ACCLib/vcs/Resource.pm
opt/VRTS/.ACCLib/vcs/VCSDefines.pm
opt/VRTS/.ACCLib/vcs/VCSHighLevel.pm
opt/VRTS/.ACCLib/vcs/VCSType.pm
opt/VRTS/.ACCLib/vcs/VCSagentFW.pm
opt/VRTS/.ACCLib/vcs/Version.pm
opt/VRTS/messages/en/VRTSvcsSunVRTSacclib.bmc
918 blocks
Executing postinstall script.

Installation of <VRTSacclib> on zone <testzone> was successful.
Bash-3.2#

NOW INSTALL ON NODE 2

THEN GO BACK TO NODE 1

bash-3.2# gzip -d HA_ag_mysql_agent_5.1.2.0_VCS6.0_Solaris_x86-64.tar.gz
bash-3.2# tar xvf HA_ag_mysql_agent_5.1.2.0_VCS6.0_Solaris_x86-64.tar
x ., 0 bytes, 0 tape blocks
x ./docs, 0 bytes, 0 tape blocks
x ./docs/vcs_mysql_install.pdf, 1202908 bytes, 2350 tape blocks
x ./pkgs, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/pkgmap, 1637 bytes, 4 tape blocks
x ./pkgs/VRTSmysql/pkginfo, 271 bytes, 1 tape blocks
x ./pkgs/VRTSmysql/root, 0 bytes, 0 tape blocks

x ./pkgs/VRTSmysql/root/etc, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents/ha, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents/ha/conf, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents/ha/conf/MySQL, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents/ha/conf/MySQL/MySQLTypes50.cf, 690 bytes, 2 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents/ha/conf/MySQL/MySQLTypes51.cf, 707 bytes, 2 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents/ha/conf/MySQL/main.cf, 1454 bytes, 3 tape blocks
x ./pkgs/VRTSmysql/root/etc/VRTSagents/ha/conf/MySQL/main_zones.cf, 1124 bytes, 3 tape blocks
x ./pkgs/VRTSmysql/root/opt, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTS, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTS/messages, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTS/messages/en, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTS/messages/en/VRTSvcsSunMySQL.bmc, 4870 bytes, 10 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents/ha, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents/ha/bin, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents/ha/bin/MySQL, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents/ha/bin/MySQL/MySQL.pm, 99552 bytes, 195 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents/ha/bin/MySQL/MySQL.xml, 10824 bytes, 22 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents/ha/bin/MySQL/imf_init, 1903 bytes, 4 tape blocks
x ./pkgs/VRTSmysql/root/opt/VRTSagents/ha/bin/MySQL/monitor, 22907 bytes, 45 tape blocks
x ./pkgs/VRTSmysql/install, 0 bytes, 0 tape blocks
x ./pkgs/VRTSmysql/install/copyright, 862 bytes, 2 tape blocks
x ./pkgs/VRTSmysql/install/depend, 1228 bytes, 3 tape blocks
x ./pkgs/VRTSmysql/install/postinstall, 2283 bytes, 5 tape blocks
x ./pkgs/VRTSmysql/install/postremove, 3234 bytes, 7 tape blocks
bash-3.2#

bash-3.2# cd pkgs
bash-3.2# ls -al
total 170
drwxrwxr-x 3 root   root   4 Sep 27 04:59 .
drwxr-xr-x 8 root   root   16 Sep 27 04:59 ..
-rwxr-xr-x 1 root   root   73728 Sep 9 2010 VRTSacclib.pkg
drwxrwxr-x 4 root   root   6 Mar 21 2012 VRTSmysql
bash-3.2# pkgadd -d .

The following packages are available:
  1 VRTSmysql   Veritas High Availability Agent for MySQL by Symantec
          (i386) 5.1.2.0

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:

hit enter

bash-3.2# pkgadd -d .

The following packages are available:
  1 VRTSmysql   Veritas High Availability Agent for MySQL by Symantec
          (i386) 5.1.2.0

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:
Verifying package <VRTSmysql> dependencies in zone <testzone>
WARNING: setting mode of </etc/VRTSagents/ha/conf/MySQL> to default mode (755)
WARNING: setting mode of </opt/VRTSagents/ha/bin/MySQL> to default mode (755)

The package <VRTSmysql> contains scripts which will be executed on
zone <testzone> with super-user permission during the process of
installing this package.

Do you want to continue with the installation of <VRTSmysql> [y,n,?] y

Processing package instance <VRTSmysql> from </var/tmp/pkgs>
Installing package <VRTSmysql> in global zone

Veritas High Availability Agent for MySQL by Symantec(i386) 5.1.2.0

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performance, display or disclosure of the Licensed Software and Documentation
by the U.S. Government shall be solely in accordance with the terms of this
Agreement.

Processing package information.
Processing system information.
WARNING: setting mode of </etc/VRTSagents/ha/conf/MySQL> to default mode (755)
WARNING: setting mode of </opt/VRTSagents/ha/bin/MySQL> to default mode (755)
   11 package pathnames are already properly installed.
Verifying package dependencies.
Verifying disk space requirements.
Checking for conflicts with packages already installed.
Checking for setuid/setgid programs.

This package contains scripts which will be executed with super-user permission during the process of installing this package.

Do you want to continue with the installation of <VRTSmysql> [y,n,?] y

Installing Veritas High Availability Agent for MySQL by Symantec as <VRTSmysql>

Installing part 1 of 1.
/etc/VRTSagents/ha/conf/MySQL/MySQLTypes50.cf
/etc/VRTSagents/ha/conf/MySQL/MySQLTypes51.cf
/etc/VRTSagents/ha/conf/MySQL/main.cf
/etc/VRTSagents/ha/conf/MySQL/main_zones.cf
/opt/VRTS/messages/en/VRTSvcsSunMySQL.bmc
/opt/VRTSagents/ha/bin/MySQL/MySQL.pm
/opt/VRTSagents/ha/bin/MySQL/MySQL.xml
/opt/VRTSagents/ha/bin/MySQL/clean <symbolic link>
/opt/VRTSagents/ha/bin/MySQL/imf_init
/opt/VRTSagents/ha/bin/MySQL/monitor
/opt/VRTSagents/ha/bin/MySQL/offline <symbolic link>
/opt/VRTSagents/ha/bin/MySQL/online <symbolic link>
[verifying class <none>]
Executing postinstall script.

Installation of <VRTSmysql> was successful.
Installing package <VRTSmysql> in zone <testzone>

Veritas High Availability Agent for MySQL by Symantec(i386) 5.1.2.0
Processing package information.
Processing system information.
WARNING: setting mode of </etc/VRTSagents/ha/conf/MySQL> to default mode (755)
WARNING: setting mode of </opt/VRTSagents/ha/bin/MySQL> to default mode (755)
** 11 package pathnames are already properly installed.**

Installing Veritas High Availability Agent for MySQL by Symantec as <VRTSmysql>

Installing part 1 of 1.
/etc/VRTSagents/ha/conf/MySQL/MySQLTypes50.cf
/etc/VRTSagents/ha/conf/MySQL/MySQLTypes51.cf
/etc/VRTSagents/ha/conf/MySQL/main.cf
/etc/VRTSagents/ha/conf/MySQL/main_zones.cf
/opt/VRTS/messages/en/VRTSvcsSunMySQL.bmc
/opt/VRTSagents/ha/bin/MySQL/MySQL.pm
/opt/VRTSagents/ha/bin/MySQL/MySQL.xml
/opt/VRTSagents/ha/bin/MySQL/clean <symbolic link>
/opt/VRTSagents/ha/bin/MySQL/imf_init
/opt/VRTSagents/ha/bin/MySQL/monitor
/opt/VRTSagents/ha/bin/MySQL/offline <symbolic link>
/opt/VRTSagents/ha/bin/MySQL/online <symbolic link>

[verifying class <none>]
Executing postinstall script.

Installation of <VRTSmysql> on zone <testzone> was successful.
Bash-3.2#
NOW INSTALL IT ON NODE 2

after installing on NODE2, go to NODE1 and do this:

bash-3.2# mkdir /tmp/temp
bash-3.2# cd /tmp/temp
bash-3.2# cp /etc/VRTSagents/ha/conf/MySQL/MySQLTypes51.cf .
Bash-3.2#

bash-3.2# echo 'include "MySQLTypes51.cf"' > main.cf

bash-3.2# hacf -verify .
bash-3.2# sh main.cmd
bash-3.2# haconf -dump
bash-3.2#

bash-3.2# haconf -dump
bash-3.2# hares -add res_mysql MySQL testgrp
VCS NOTICE V-16-1-10242 Resource added. Enabled attribute must be set before agent
monitors
bash-3.2# hares -modify res_mysql Critical 0
bash-3.2# hares -modify res_mysql ResLogLevel TRACE
bash-3.2# hares -modify res_mysql MySQLAdminPasswd abc123
bash-3.2# hares -modify res_mysql BaseDir /opt/mysql/mysql
bash-3.2# hares -modify res_mysql DataDir /opt/mysql/mysql/data
bash-3.2# hares -modify res_mysql MyCnf   /opt/mysql/mysql/my.cnf
bash-3.2# hares -modify res_mysql HostName testzone

bash-3.2# haconf -dump
bash-3.2# hares -modify res_mysql Enabled 1
bash-3.2# haconf -dump
bash-3.2#
bash-3.2# hares -link res_mysql vcszone
bash-3.2# haconf -dump
bash-3.2#

ON the zone kill all mysql processes

ON NODE 1: do a hastatus -sum
hastatus -sum
hares -clear res_mysql -sys solaris10-1

hares -clear res_mysql -sys solaris10-2

You might get some errors....

do hastatus -sum
hastatus -sum
NOTE DOWN THE NODE ON WHICH "testgrp" is ONLINE

then offline it on that node
FOR INSTANCE
hagrp -offline testgrp -sys solaris10-1
also run
hagrp -offline testgrp -sys solaris10-2

hastatus -sum
hastatus -sum
haststus -sum

to watch till it is OFFLINE on all nodes

THEN ONLINE IT AGAIN ON any NODE

For instance:
hagrp -online testgrp -sys solaris10-1

AS BEFORE DO
hastatus -sum
hastatus -sum
hastatus -sum

in one putty session of node1

and in another putty session of node1 or node2 do:

tail -f /var/VRTSvcs/log/engine_A.log

WATCH WHAT HAPPENS, IN TIME, testgrp should be ONLINE

You should, see:

bash-3.2# tail -f /var/VRTSvcs/log/engine_A.log
2013/11/11 23:15:38 VCS INFO V-16-2-13716 (solaris10-1) Resource(res_mysql): Output of the
completed operation (online)
==
131111 23:14:45 mysqld_safe Logging to '/opt/mysql/mysql/data/testzone.err'.

131111 23:14:45 mysqld_safe Starting mysqld daemon with databases from /opt/mysql/mysql/data

==

2013/11/11 23:15:39 VCS INFO V-16-1-10298 Resource res_mysql (Owner: Unspecified, Group: testgrp) is online on solaris10-1 (VCS initiated)
2013/11/11 23:15:39 VCS NOTICE V-16-1-10447 Group testgrp is online on system solaris10-1
2013/11/12 01:34:34 VCS INFO V-16-1-53504 VCS Engine Alive message!!
2013/11/12 05:34:30 VCS INFO V-16-1-53504 VCS Engine Alive message!!

If there are issues please write to me: kartik.unix@gmail.com

NOW WE WILL INSTALL APACHE(LATEST VERSION) – WE WILL BUILD IT FROM SOURCE(THAT'S THE ONLY WAY TO GET THE LATEST EVRSION) AND THEN TEST TO SEE IF IT WORKS OUTSIDE OF THE CLUSTER AND THEN ADD IT TO THE CLUSTER.

GO TO:
http://httpd.apache.org/

Apache httpd 2.4.6 Released	2013-07-22

The Apache Software Foundation and the Apache HTTP Server Project are pleased to announce the release of version 2.4.6 of the Apache HTTP Server ("Apache"). This version of Apache is our latest GA release of the new generation 2.4.x branch of Apache HTTPD and represents fifteen years of innovation by the project, and is recommended over all previous releases. This version of Apache is principally a security and bug fix release.

This version of httpd is a major release of the 2.4 stable branch, and represents the best available version of Apache HTTP Server. New features include Loadable MPMs, major improvements to OCSP support, mod_lua, Dynamic Reverse Proxy configuration, Improved Authentication/Authorization, FastCGI Proxy, New Expression Parser, and a Small Object Caching API.

Download | New Features in httpd 2.4 | Complete ChangeLog for 2.4 | ChangeLog for just 2.4.6

LET US DOWNLOAD IT

- Unix Source: httpd-2.4.6.tar.gz [PGP] [MD5] [SHA1]

SCP IT TO THE ZONE:

become root on the zone

bash-3.2# cd /var/tmp
bash-3.2# ls -al
./.sysidtool_out: Checksum failure
./.sysidtool_in: Checksum failure
./.sysidtool_pid: Checksum failure
total 6885601
drwxrwxrwt   4 root   sys   10 Nov 12 11:32 .
drwxr-xr-x 44 root   sys   44 Nov 11 19:15 ..
drwxr-xr-x   2 root   root   2 Nov 11 21:39 dstreAAAqWaOrU

```
-rw-r--r--   1 root    root     6700153 Nov 12 11:30 httpd-2.4.6.tar.gz
drwxr-xr-x  2 mysql   mysql        4 Nov 11 22:42 mysql
-rw-r--r--   1 root    root    1536622592 Nov 11 21:34 mysql-5.5.34-solaris10-x86_64.pkg
-rw-r--r--   1 root    root    1979327488 Nov 10 09:44 mysql-5.6.14-solaris11-x86_64.pkg
bash-3.2#

bash-3.2# gzip -d httpd-2.4.6.tar.gz
bash-3.2# tar xvf httpd-2.4.6.tar

bash-3.2# cd httpd-2.4.6
bash-3.2# ls -al
total 3513
drwxr-xr-x  11 501    staff       42 Jul 15 11:44 .
drwxrwxrwt   5 root    sys         11 Nov 12 11:34 ..
-rw-r--r--   1 501    staff        0 Jul 15 11:44 .deps
-rw-r--r--   1 501    staff     10566 Jul 25  2012 .gdbinit
-rw-r--r--   1 501    staff     13507 Mar 29  2011 ABOUT_APACHE
-rw-r--r--   1 501    staff     64618 Jun 13 10:09 Apache-apr2.dsw
-rw-r--r--   1 501    staff     79013 Jun 13 10:09 Apache.dsw
-rw-r--r--   1 501    staff      2644 Aug 23  2007 BuildAll.dsp
-rw-r--r--   1 501    staff      2724 Nov 12  2011 BuildBin.dsp
-rw-r--r--   1 501    staff    138742 Jul 15 11:02 CHANGES
-rw-r--r--   1 501    staff      5083 Aug 16  2012 INSTALL
-rw-r--r--   1 501    staff      2909 Nov 14  2011 InstallBin.dsp
-rw-r--r--   1 501    staff      4142 Dec 15  2010 LAYOUT
-rw-r--r--   1 501    staff     25852 Jul 23  2011 LICENSE
-rw-r--r--   1 501    staff      9617 Dec 17  2012 Makefile.in
-rw-r--r--   1 501    staff     47214 Jun 13 10:09 Makefile.win
-rw-r--r--   1 501    staff      550 Jan  5  2013 NOTICE
-rw-r--r--   1 501    staff     13770 Dec 17  2012 NWGNUmakefile
-rw-r--r--   1 501    staff      5158 Feb 20  2012 README
-rw-r--r--   1 501    staff      5572 Apr 23  2010 README.platforms
-rw-r--r--   1 501    staff     10184 Oct 30  2010 ROADMAP
-rw-r--r--   1 501    staff      8183 Feb 28  2007 VERSIONING
-rw-r--r--   1 501    staff     24108 Jan 30  2013 acinclude.m4
-rw-r--r--   1 501    staff      2512 Dec 21  2008 ap.d
-rw-r--r--   1 501    staff      9907 Dec 18  2009 apache_probes.d
drwxr-xr-x   6 501    staff       45 Nov 12 11:34 build
-rwxr-xr-x   1 501    staff      6800 Sep 19  2012 buildconf
-rw-r--r--   1 501    staff     12567 Apr 17  2012 config.layout
-rwxr-xr-x   1 501    staff    982693 Jul 15 11:44 configure
-rw-r--r--   1 501    staff     28208 Jun 26 08:01 configure.in
drwxr-xr-x   9 501    staff       10 Nov 12 11:34 docs
-rw-r--r--   1 501    staff      403 Nov 21  2004 emacs-style
-rw-r--r--   1 501    staff      4124 Jun 11  2008 httpd.dsp
-rw-r--r--   1 501    staff     17615 Jul 15 11:44 httpd.spec
drwxr-xr-x   2 501    staff       46 Nov 12 11:34 include
-rw-r--r--   1 501    staff     20602 May 28 09:26 libhttpd.dsp
drwxr-xr-x  26 501    staff       30 Nov 12 11:34 modules
```

```
drwxr-xr-x  7 501      staff        10 Nov 12 11:34 os
drwxr-xr-x  3 501      staff        48 Nov 12 11:34 server
drwxr-xr-x  2 501      staff         3 Nov 12 11:34 srclib
drwxr-xr-x  4 501      staff        51 Nov 12 11:34 support
drwxr-xr-x  2 501      staff        15 Jul 15 11:43 test
bash-3.2#
```

READ THE FILE "INSTALL" BY DOING A
more INSTALL
READ THE FILE "README" BY DOING A
more README

```
bash-3.2# export PATH=$PATH:/usr/sfw/bin:/usr/ucb/bin:/usr/ccs/bin

bash-3.2# which gcc
/usr/sfw/bin/gcc
bash-3.2# which make
/usr/ccs/bin/make

bash-3.2#  ./configure --prefix=/apps/apache2
checking for chosen layout... Apache
checking for working mkdir -p... yes
checking for grep that handles long lines and -e... /usr/sfw/bin/ggrep
checking for egrep... /usr/sfw/bin/ggrep -E
checking build system type... i386-pc-solaris2.10
checking host system type... i386-pc-solaris2.10
checking target system type... i386-pc-solaris2.10
configure:
configure: Configuring Apache Portable Runtime library...
configure:
checking for APR... no
configure: error: APR not found.  Please read the documentation.
Bash-3.2#
```

SO WE NEED APR

download APR FROM:
http://apr.apache.org/
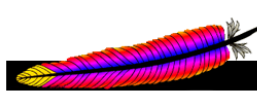
Apache
Portable Runtime Project

Downloading the Apache Portable Runtime

Use the links below to download the Apache Portable Runtime from one of our mirrors. You **must** verify the integrity of the downloaded files using signatures downloaded from our main distribution directory.

Only current recommended releases are available on the main distribution site and its mirrors. Older releases are available from the archive download site.

Mirror

The currently selected mirror is **http://www.poolsaboveground.com/apache/**. If you encounter a problem with this mirror, please select another mirror. If all mirrors are failing, there are *backup* mirrors (at the end of the mirrors list) that should be available.

Other mirrors: [http://www.poolsaboveground.com/apache/ ▾] [Change]

You may also consult the complete list of mirrors.

APR 1.4.8 is the best available version

APR is the base portability library.

- Unix Source: apr-1.4.8.tar.gz [PGP] [MD5]
- Unix Source: apr-1.4.8.tar.bz2 [PGP] [MD5]
- Win32 Source: apr-1.4.8-win32-src.zip [PGP] [MD5] [SHA1]
- Other files

APR-util 1.5.2 is the best available version

APR-util provides a number of helpful abstractions on top of APR.

- Unix Source: apr-util-1.5.2.tar.gz [PGP] [MD5]
- Unix Source: apr-util-1.5.2.tar.bz2 [PGP] [MD5]
- Windows Source: apr-util-1.5.2-win32-src.zip [PGP] [MD5]
- Other files

APR iconv 1.2.1 is the best available version

APR-iconv provides a portable iconv() implementation built on top of APR. It is generally of interest only where no system provided iconv() is available (either in libiconv, or libc as applicable). An example is the Windows platform, where APR-iconv is required to enable the APR-util library's apr_xlate feature.

- Unix Source: apr-iconv-1.2.1.tar.gz [PGP] [MD5]
- Unix Source: apr-iconv-1.2.1.tar.bz2 [PGP] [MD5]
- Windows Source: apr-iconv-1.2.1-win32-src-r2.zip [PGP] [MD5]
- Other files

APR 0.9.20 is also available

APR is the base portability library.

- Unix Source: apr-0.9.20.tar.gz [PGP] [MD5]
- Unix Source: apr-0.9.20.tar.bz2 [PGP] [MD5]
- Windows Source: apr-0.9.20-win32-src.zip [PGP] [MD5]

The 0.9.20 release provides a security fix to previously released versions, and all users are strongly cautioned to update.

APR-util 0.9.19 is also available

APR-util provides a number of helpful abstractions on top of APR. The 0.9.19 release provides a number of security fixes to previous released versions, and all users are strongly cautioned to update.

- Unix Source: apr-util-0.9.19.tar.gz [PGP] [MD5]
- Unix Source: apr-util-0.9.19.tar.bz2 [PGP] [MD5]
- Windows Source: apr-util-0.9.19-win32-src.zip [PGP] [MD5]

APR iconv 0.9.7 is also available

APR-iconv provides a portable iconv() implementation built on top of APR. It is generally of interest only where no system provided iconv() is available (either in libiconv, or libc as applicable). An example is the Windows platform, where APR-iconv is required to enable the APR-util library's apr_xlate feature.

- Unix Source: apr-iconv-0.9.7.tar.gz [PGP] [MD5]
- Unix Source: apr-iconv-0.9.7.tar.bz2 [PGP] [MD5]
- Windows Source: apr-iconv-0.9.7-win32-src-r2.zip [PGP] [MD5]

Verify the integrity of the files

It is essential that you verify the integrity of the downloaded files using the PGP or MD5 signatures. Please read Verifying Apache HTTP Server Releases for more information on why you should verify our releases. (The same rationale applies to APR as to HTTP Server.)

The PGP signatures can be verified using PGP or GPG. First download the KEYS as well as the asc signature file for the particular distribution. Make sure you get these files from the main distribution directory, rather than from a mirror. Then verify the signatures using

```
% pgpk -a KEYS
% pgpv apr-1.0.1.tar.gz.asc
or
% pgp -ka KEYS
% pgp apr-1.0.1.tar.gz.asc
or
% gpg --import KEYS
% gpg --verify apr-1.0.1.tar.gz.asc
```

Alternatively, you can verify the MD5 and/or SHA1 signature on the files. An MD5 hash consists of a 32 character string (example: *d41d8cd98f00b204e9800998ecf8427e*), and a SHA1 hash consists of a 40 character string (example: *da39a3ee5e6b4b0d3255bfef95601890afd80709*). To verify the hash on a file, generate a hash string of your own on the file, and compare the hash string you get with the hash string published inside the signature files. A unix program called md5 or md5sum is included in many unix distributions. It is also available as part of GNU Textutils. Windows users can get binary md5 programs from here, here, or here.

WE WILL DOWNLOAD BOTH APR AND APR-UTIL

APR 1.4.8 is the best available version

APR is the base portability library.

- Unix Source: apr-1.4.8.tar.gz [PGP] [MD5]
- Unix Source: apr-1.4.8.tar.bz2 [PGP] [MD5]
- Win32 Source: apr-1.4.8-win32-src.zip [PGP] [MD5] [SHA1]
- Other files

APR-util 1.5.2 is the best available version

APR-util provides a number of helpful abstractions on top of APR.

- Unix Source: apr-util-1.5.2.tar.gz [PGP] [MD5]
- Unix Source: apr-util-1.5.2.tar.bz2 [PGP] [MD5]
- Windows Source: apr-util-1.5.2-win32-src.zip [PGP] [MD5]
- Other files

ADD iconv 1 2 1 is the best available version

SCP THEM OVER TO THE ZONE
```
cd /var/tmp
bash-3.2# ls -al
./.sysidtool_out: Checksum failure
./.sysidtool_in: Checksum failure
./.sysidtool_pid: Checksum failure
total 6941204
drwxrwxrwt   5 root     sys           13 Nov 12 11:47 .
drwxr-xr-x  44 root     sys           44 Nov 11 19:15 ..
-rw-r--r--   1 root     root      979397 Nov 12 11:47 apr-1.4.8.tar.gz
-rw-r--r--   1 root     root      867573 Nov 12 11:47 apr-util-1.5.2.tar.gz
drwxr-xr-x   2 root     root           2 Nov 11 21:39 dstreAAAqWaOrU
drwxr-xr-x  11 501      staff         44 Nov 12 11:43 httpd-2.4.6
-rw-r--r--   1 root     root    33291776 Nov 12 11:30 httpd-2.4.6.tar
drwxr-xr-x   2 mysql    mysql          4 Nov 11 22:42 mysql
-rw-r--r--   1 root     root    1536622592 Nov 11 21:34 mysql-5.5.34-solaris10-x86_64.pkg
-rw-r--r--   1 root     root    1979327488 Nov 10 09:44 mysql-5.6.14-solaris11-x86_64.pkg
b

bash-3.2# gzip -d apr-1.4.8.tar.gz
bash-3.2# tar xvf apr-1.4.8.tar

bash-3.2# cd apr-1.4.8
bash-3.2#
./configure
make
make install
```

NOTE LOCATION OF SAVED APR IT IS:
 /usr/local/apr/bin/apr-1-config

NOW WE WILL BUILD(COMPILE) APR-UTIL

bash-3.2# cd /var/tmp
bash-3.2# ls -al
./.sysidtool_out: Checksum failure
./.sysidtool_in: Checksum failure
./.sysidtool_pid: Checksum failure
total 6949663
drwxrwxrwt   6 root   sys   14 Nov 12 11:51 .
drwxr-xr-x 44 root   sys   44 Nov 11 19:15 ..
drwxr-xr-x 26 1000   1000   64 Nov 12 11:51 apr-1.4.8
-rw-r--r--   1 root   root   5335040 Nov 12 11:47 apr-1.4.8.tar
-rw-r--r--   1 root   root   867573 Nov 12 11:47 apr-util-1.5.2.tar.gz
drwxr-xr-x   2 root   root   2 Nov 11 21:39 dstreAAAqWaOrU
drwxr-xr-x 11 501   staff   44 Nov 12 11:43 httpd-2.4.6
-rw-r--r--   1 root   root   33291776 Nov 12 11:30 httpd-2.4.6.tar
drwxr-xr-x   2 mysql   mysql   4 Nov 11 22:42 mysql
-rw-r--r--   1 root   root   1536622592 Nov 11 21:34 mysql-5.5.34-solaris10-x86_64.pkg
-rw-r--r--   1 root   root   1979327488 Nov 10 09:44 mysql-5.6.14-solaris11-x86_64.pkg
bash-3.2# gzip -d apr-util-1.5.2.tar.gz
bash-3.2# tar xvf apr-util-1.5.2.tar

bash-3.2# cd apr-util-1.5.2
bash-3.2# ./configure --with-apr=/usr/local/apr/bin/apr-1-config
make
make installation
NOTE LOCATION OF APR-UTIL IT IS:
/usr/local/apr/bin/apu-1-config

NOW WE CAN GO BACK TO BUILDING APACHE

bash-3.2# cd /var/tmp/httpd-2.4.6
bash-3.2#

bash-3.2# ./configure --prefix=/apps/apache2 --with-included-apr=/usr/local/apr/bin/apr-1-config
checking for chosen layout... Apache
checking for working mkdir -p... yes
checking for grep that handles long lines and -e... /usr/sfw/bin/ggrep
checking for egrep... /usr/sfw/bin/ggrep -E
checking build system type... i386-pc-solaris2.10
checking host system type... i386-pc-solaris2.10
checking target system type... i386-pc-solaris2.10
configure:
configure: Configuring Apache Portable Runtime library...
configure:
checking for APR... yes
  setting CC to "gcc"
  setting CPP to "gcc -E"

setting CFLAGS to " -g -O2"
  setting CPPFLAGS to " -DSOLARIS2=10 -D_POSIX_PTHREAD_SEMANTICS -D_REENTRANT -D_LARGEFILE64_SOURCE"
  setting LDFLAGS to " "
configure:
configure: Configuring Apache Portable Runtime Utility library...
configure:
checking for APR-util... yes
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking for gcc option to accept ISO C89... none needed
checking how to run the C preprocessor... gcc -E
checking for gcc option to accept ISO C99... -std=gnu99
checking for pcre-config... false
configure: error: pcre-config for libpcre not found. PCRE is required and available from http://pcre.org/
bash-3.2#

SO WE NEED PCRE

LET US DOWNLOAD IT:

GO TO:
http://pcre.org/

Index of /pub/software/programming/pcre/

Name	Size	Date Modified
[parent directory]		
Contrib/		5/14/13 12:00:00 AM
Public-Key	2.1 kB	4/27/07 12:00:00 AM
Testing/		8/28/13 9:25:00 AM
pcre-8.21.tar.bz2	1.1 MB	12/12/11 12:00:00 AM
pcre-8.21.tar.bz2.sig	287 B	12/12/11 12:00:00 AM
pcre-8.21.tar.gz	1.5 MB	12/12/11 12:00:00 AM

SCP IT OVER TO THE ZONE IN /var/tmp

bash-3.2# cd /var/tmp
bash-3.2# ls -al
./.sysidtool_out: Checksum failure
./.sysidtool_in: Checksum failure

./.sysidtool_pid: Checksum failure
total 6957611
drwxrwxrwt 7 root   sys   16 Nov 12 12:01 .
drwxr-xr-x 44 root   sys   44 Nov 11 19:15 ..
drwxr-xr-x 26 1000   1000   64 Nov 12 11:51 apr-1.4.8
-rw-r--r-- 1 root   root   5335040 Nov 12 11:47 apr-1.4.8.tar
drwxr-xr-x 20 1000   1000   59 Nov 12 11:55 apr-util-1.5.2
-rw-r--r-- 1 root   root   4894720 Nov 12 11:47 apr-util-1.5.2.tar
drwxr-xr-x 2 root   root   2 Nov 11 21:39 dstreAAAqWaOrU
drwxr-xr-x 11 501   staff   44 Nov 12 11:59 httpd-2.4.6
-rw-r--r-- 1 root   root   33291776 Nov 12 11:30 httpd-2.4.6.tar
drwxr-xr-x 2 mysql   mysql   4 Nov 11 22:42 mysql
-rw-r--r-- 1 root   root   1536622592 Nov 11 21:34 mysql-5.5.34-solaris10-x86_64.pkg
-rw-r--r-- 1 root   root   1979327488 Nov 10 09:44 mysql-5.6.14-solaris11-x86_64.pkg
-rw-r--r-- 1 root   root   1556329 Nov 12 12:01 pcre-8.21.tar.gz
bash-3.2# gzip -d pcre-8.21.tar.gz
bash-3.2# tar xvf pcre-8.21.tar

bash-3.2# cd pcre-8.21
bash-3.2# ./configure
make
make install

bash-3.2# find / -name pcre-config -print
find: stat() error /etc/nodename: Checksum failure
find: stat() error /etc/inet/hosts: Checksum failure
/usr/local/bin/pcre-config
^C
bash-3.2#

LET US ADD /usr/local/bin TO THE path AND TRY BUILDING APACHE AGAIN

bash-3.2# export PATH=$PATH:/usr/local/bin

bash-3.2# cd /var/tmp/httpd-2.4.6
bash-3.2# ./configure --prefix=/apps/apache2 –with-included-apr=/usr/local/apr/bin/apr-1-config

make
make install

LET US TRY STARTING APACHE OUTSIDE OF CLUSTER CONTROL, JUST TO CHECK IF IT
WORKS

bash-3.2# cd /apps/apache2
bash-3.2# ls -al
total 60
drwxr-xr-x 14 root   root   14 Nov 12 12:14 .
drwxr-xr-x   3 root   root   3 Nov 12 12:14 ..

```
drwxr-xr-x   2 root     root          18 Nov 12 12:14 bin
drwxr-xr-x   2 root     root          11 Nov 12 12:14 build
drwxr-xr-x   2 root     root           6 Nov 12 12:14 cgi-bin
drwxr-xr-x   4 root     root           7 Nov 12 12:14 conf
drwxr-xr-x   3 root     root          22 Nov 12 12:14 error
drwxr-xr-x   2 root     root           3 Nov 12 11:34 htdocs
drwxr-xr-x   3 root     root         179 Nov 12 12:14 icons
drwxr-xr-x   2 root     root          63 Nov 12 12:14 include
drwxr-xr-x   2 root     root           2 Nov 12 12:14 logs
drwxr-xr-x   4 root     root           4 Nov 12 12:14 man
drwxr-xr-x  14 root     root         202 Jul 15 11:44 manual
drwxr-xr-x   2 root     root          86 Nov 12 12:14 modules
bash-3.2# cd bin
bash-3.2# ls -al
total 3383
drwxr-xr-x   2 root     root          18 Nov 12 12:14 .
drwxr-xr-x  14 root     root          14 Nov 12 12:14 ..
-rwxr-xr-x   1 root     root      101564 Nov 12 12:14 ab
-rwxr-xr-x   1 root     root        3422 Nov 12 12:12 apachectl
-rwxr-xr-x   1 root     root       23520 Nov 12 12:12 apxs
-rwxr-xr-x   1 root     root       16812 Nov 12 12:14 checkgid
-rwxr-xr-x   1 root     root        8925 Nov 12 12:12 dbmmanage
-rw-r--r--   1 root     root        1063 Nov 12 12:12 envvars
-rw-r--r--   1 root     root        1063 Nov 12 12:12 envvars-std
-rwxr-xr-x   1 root     root       22560 Nov 12 12:14 fcgistarter
-rwxr-xr-x   1 root     root       53096 Nov 12 12:14 htcacheclean
-rwxr-xr-x   1 root     root       35532 Nov 12 12:14 htdbm
-rwxr-xr-x   1 root     root       22560 Nov 12 12:14 htdigest
-rwxr-xr-x   1 root     root       34608 Nov 12 12:14 htpasswd
-rwxr-xr-x   1 root     root     1223208 Nov 12 12:14 httpd
-rwxr-xr-x   1 root     root       22240 Nov 12 12:14 httxt2dbm
-rwxr-xr-x   1 root     root       23804 Nov 12 12:14 logresolve
-rwxr-xr-x   1 root     root       33076 Nov 12 12:14 rotatelogs
bash-3.2# ./apachectl start
```

H00558: httpd: Could not reliably determine the server's fully qualified domain name, using 10.0.0.45.
Set the 'ServerName' directive globally to suppress this message
bash-3.2#

GO TO HTTP://10.0.0.45 (YOUR IP ADDRESS WILL BE DIFFERENT)

It works!

SO OUR APACHE CONFIGURATION WORKS OUTSIDE OF CLUSTER CONTROL. NOW WE
WILL STOP THE APACHE PROCESS(httpd) AND PUT APACHE UNDER CLUSTER CONTROL

bash-3.2# ./apachectl stop

GO TO ANY NODE:

bash-3.2# hares -clear res_mysql -sys solaris10-1
bash-3.2# hares -online res_mysql -sys solaris10-1
bash-3.2# hares -add res_apache Apache testgrp
VCS NOTICE V-16-1-10242 Resource added. Enabled attribute must be set before agent monitors
bash-3.2# hares -modify res_apache ResLogLevel TRACE
bash-3.2# hares -modify res_apache httpdDir /apps/apache2/bin
bash-3.2# hares -modify res_apache PidFile /apps/apache2/logs/httpd.pid
bash-3.2# hares -modify res_apache HostName testzone
bash-3.2# hares -modify res_apache User root
bash-3.2# hares -modify res_apache ConfigFile /apps/apache2/conf/httpd.conf
bash-3.2# haconf -dump
bash-3.2# hares -modify res_apache Enabled 1
bash-3.2# haconf -dump
bash-3.2#
bash-3.2# hares -link res_apache res_mysql

bash-3.2# haconf -dump

bash-3.2# hastatus -sum

-- SYSTEM STATE
-- System   State   Frozen

A solaris10-1   RUNNING   0
A solaris10-2   RUNNING   0

-- GROUP STATE
-- Group   System   Probed   AutoDisabled   State

B ClusterService solaris10-1   Y   N   ONLINE
B ClusterService solaris10-2   Y   N   OFFLINE
B testgrp   solaris10-1   N   N   ONLINE
B testgrp   solaris10-2   Y   N   OFFLINE

-- RESOURCES NOT PROBED
-- Group   Type   Resource   System

E testgrp   Apache   res_apache   solaris10-1
bash-3.2#

bash-3.2# hares -probe res_apache -sys solaris10-1

STILL SHOWS UP AS NOT PROBED.....

SO...

bash-3.2# hares -online res_apache -sys solaris10-1
VCS WARNING V-16-1-10283 Resource has not been probed on system solaris10-1
bash-3.2# hagrp -offline testgrp -sys solaris10-1
bash-3.2#

bash-3.2# hagrp -switch testgrp -to solaris10-2
bash-3.2#

AND IF WE DO A tail -f (see output as it's being written to log file), we see a most wonderful result:

bash-3.2# tail -f /var/VRTSvcs/log/engine_A.log
===
131114 05:19:20 mysqld_safe Logging to '/opt/mysql/mysql/data/testzone.err'.
131114 05:19:20 mysqld_safe Starting mysqld daemon with databases from /opt/mysql/mysql/data
===

2013/11/14 05:19:36 VCS INFO V-16-1-10298 Resource res_mysql (Owner: Unspecified, Group:
testgrp) is online on solaris10-2 (VCS initiated)

2013/11/14 05:19:36 VCS NOTICE V-16-1-10301 Initiating Online of Resource res_apache (Owner: Unspecified, Group: testgrp) on System solaris10-2
2013/11/14 05:19:38 VCS NOTICE V-16-10061-20494 (solaris10-2)
Apache:res_apache:online:<Apache::Start> Command exit code [0]. Command output [AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 192.168.0.76. Set the 'ServerName' directive globally to suppress this message]
2013/11/14 05:19:51 VCS INFO V-16-1-10298 Resource res_apache (Owner: Unspecified, Group: testgrp) is online on solaris10-2 (VCS initiated)
2013/11/14 05:19:51 VCS NOTICE V-16-1-10447 Group testgrp is online on system solaris10-2