Changing IP and Hostname Info for SP at AIX 3.2.5

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> **Note:** The information in this document is **not** applicable for AIX 4.1.

About This Document

This document explains the necessary steps required to change hostname and IP address information within the SP environment. This procedure can take anywhere from 1 hour to 6 hours depending on whether hostnames and/or IP addresses needed to be changed on your control workstation and/or the sp nodes. Please plan accordingly.

Note: Log directly into the console instead of Telnet. Changing IP addresses can terminate a Telnet session.

Environment

Note: This document is intended solely for use on AIX 3.2.5.x and Parallel System Support Program (PSSP) version 1.2 systems.

If you are unsure which version of PSSP you are running, run the command "lslpp -h ssp.basic". You should see the version number displayed in the output:

```
PATH: /usr/lib/objrepos
ssp.basic
01.02.0000.0000
*****
```

Procedure

The first thing that needs to be configured is the name resolution of the control workstation and all the nodes. A one- to-one mapping between hostnames and IP address is highly recommended. For Instance, the two following commands should return identical information:

```
host <new_hostname>
host <new_ip_address>
```

One should be able to resolve on the nodes and the control work- station all hostnames and IP addresses of all machines in the sp system. The following section is grouped into two parts. Part I lists all the commands that are to be executed if the IP address and/or hostname of the Control workstation changes, and Part II lists commands that need to be executed if the nodes' hostnames and/or IP addresses are changed. Items are marked HOST, IP, or BOTH.

Host: Indicates that this command needs to be executed if hostnames are changed.

IP: Indicates that this command needs to be executed if IP addresses are changed.

Both: Indicates addresses and hostnames are to be changed.

The designation for "short hostname" and "hostname" in the following document is as follows:

short hostname refers to the part of the hostname before the first period. It does not include the domain portion of a fully qualified hostname.

hostname refers to the hostname as returned by the "hostname" command when run on the machine. It could be a short name or the fully qualified name including the domain in which the host resides. It all depends on what the output of the "hostname" returns.

Examples:

1. If the "hostname" command on the Control Workstation gives the following output:

   ```
   spcntl.aix.dfw.ibm.com
   ```

   The "hostname" is "spcntl.aix.dfw.ibm.com" The "short hostname" is "spcntl"

2. However, if the "hostname" command on the Control Workstation gives the following output:

   ```
   spcntl
   ```

   Both the "hostname" and the "short hostname" are spcntl.

Note: mksysb images due for reinstallation may have old name resolution data in them. To avoid accidentally restoring inaccurate name resolution data, the

mksysb images should be remade after the full conversion of hostnames/IP addresses is complete.

PART I: Changing the Control Workstation's Hostname/IP Address

These commands need to be run on the Control Workstation:

1. Change to the proper directory or set the PATH:

```
cd /usr/lpp/ssp/bin
```

2. IP: Change IP address of effected network adapters (en0,en1,tr0,..):

```
/etc/ifconfig <adapter_name> down
smitty tcpip                  (minimum config on adapter)
```

3. HOST: Set the system hostname via smit, **Not** with the hostname command:

```
smitty hostname
```

4. BOTH: Change the hostname and IP address in /etc/SDR_dest_info file:

```
vi /etc/SDR_dest_info
ps -ef | grep sdrd
kill <sdrd process id>        (to respawn the sdrd)
```

5. HOST: Change the sdr Frame class with the new short hostname

```
SDRChangeAttrValues Frame MACN=<new_hostname>
```

6. HOST: Change the sdr SP class:

```
SDRChangeAttrValues SP control_workstation=<new_short_hostname>
```

7. IP: Change the SDR cw_ipaddrs field:

```
SDRGetObjects SP cw_ipaddrs
(take output from SDRGetObjects and replace old IP address,
include the ":"s )
SDRChangeAttrValues SP cw_ipaddrs=<new_ip_list>
```

8. HOST: Change the sdr SP_ports class:

```
SDRChangeAttrValues SP_ports hostname=<new_hostname>
```

9. HOST: Recreate the /etc/hmacls file and kill hardmon:

```
rm /etc/hmacls
/usr/lpp/ssp/inst_root/ssp.basic.post_i
/usr/lpp/ssp/install/bin/hmreinit (ignore connection errors)
```

10. BOTH: Reset hb (optional):

```
hb reset
```

11. BOTH: Make any necessary changes to the Site Environment:

```
smitty site_env_dialog
```

12. HOST: Rebuild the kerberos database and push new nodes srvtab files:

```
rm /.k
rm /.klogin
rm /etc/krb*
/usr/lpp/ssp/kerberos/etc/kdb_destroy
ps -ef | grep kerberos
kill <kerberos and kadmin daemons>
       (kill both kadmin and kerberos)
rm /var/kerberos/database/*
/usr/lpp/ssp/bin/setup_authent
```

13. BOTH: Run setup_server to create node entries in kerberos database:

```
setup_server
```

    Check setup and run:

```
spmon -d
```

    This should show information about the status of all nodes. Continue with these steps if the spmon command functions correctly. If it does not then either retry the above steps or call AIX Supportline for further assistance or to setup a Supportline Contract.

14. IP: Copy the /etc/SDR_dest_info via ftp from control workstation or manually edit file on each node:

```
ftp <node_hostname> (run this command for each node)
put /etc/SDR_dest_info
```

15. HOST: Copy the /etc/krb.conf, /etc/krb.realms and create new srvtabs from control workstation or customize the node. If planning to change hostnames/IP addresses of nodes then you can choose to customize later in Part II, step 5:

```
smitty server_dialog (set all nodes to customize from control
workstation, so srvtab are in one place)
cd /tftpboot
ftp <node_hostname> (do this step for EACH of your nodes)
bin
put <node_hostname>-new-srvtab /etc/krb-srvtab
put /etc/krb.conf
put /etc/krb.realms
quit
smitty server_dialog  (set the nodes back to disk after ftps)
```

16. HOST: Change the Home Server Directory Hostname, the AMD Server Hostname and the Password File Server Hostname as appropriate:

```
SDRGetObjects SP passwd_file_loc
SDRChangeAttrValues SP passwd_file_loc=<new_hostname>
mkdir /home/<new_short_hostname>
mv /home/<old_short_hostname> /home/<new_short_hostname>
vi /etc/exports         (change the exported home directory)
exportfs -a
vi /etc/amd/amd-maps/amd.u
(Do a global change from the old hostname to the new hostname
throughout the file as follows:
:g/old_hostname/s//new_hostname/g
:wq
```

Now amd will function properly once supper propagates the amd.u file.

Note: If reinstalling nodes proceed to step 19, otherwise go to step 17.

17. BOTH: Step 17 and 18 need to be executed on the nodes. However is you decide to reinstall your nodes then ignore these steps:

```
vi /etc/ssp/cw_name
vi /etc/ssp/server_hostname
   (modify if old hostname/ip address)
vi /etc/ssp/server_name
   (modify if old hostname/ip address)
```

18. IP: Change the ntp server information:

```
vi /etc/ntp.conf
```

19. BOTH: This is a list of other miscellaneous AIX files that can contain references to the old IP address or hostname on either the nodes or the control workstation. Make changes to these files as appropriate.

    - /resolv.conf
    - /etc/hosts.equiv
    - /etc/hosts.lpd
    - /etc/hosts
    - (any user's .rhosts file)
    - (any NIS configuration if you are using it)
    - /etc/qconfig (only if using regular aix remote printing)

Part 2: Changing the Nodes' Hostname/IP Address

This sections deals with the steps associated with a hostname or IP address change of SP nodes.

1. BOTH: First, be familiar with the SDRArchive and SDRRestore command:

```
backup sdr
man SDRArchive
man SDRRestore   (may not work and may have to manually run tar)
SDRArchive /var  (creates the tar file /var/SDRArchive.tar)
```

2. BOTH: Change the sdr Node class information:

```
smitty sp_eth_dialog
(enter correct ip addresses)
```

3. IP: Change the sdr Adapter class information, if necessary:

```
smitty add_adpt_dialog
(enter the new ip address for any additional network adapter)
```

4. HOST: Change the node's initial hostname if it has changed:

```
smitty hostname_dialog
```

   Check Setup: Check to make sure the sdr has been changed properly by running the following commands (located in /usr/lpp/ssp/bin):

```
splstdata -e         (Site Environment)
splstdata -n         (Node information)
splstdata -a         (LAN adapter information)
splstdata -s         (Switch information)
splstdata -b         (Node boot/install information)
```

   If any information is still incorrect then repeat steps 1-4 until information from splstdata is correct.

5. HOST: Set the nodes to customize:

```
smitty server_dialog
(set nodes to customize)
(shutdown nodes)
(netboot via spmon)
```

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