**Presenting new LUNs via the VIOs**

The following steps will allow you to present new SAN LUNs to the AIX LPAR using the VIO

servers and the HMC. There are steps that need to be done via the command line on the VIOs,

some as the padmin user and some as the oem user, and with the HMC GUI. Each step will need

to be done on each VIO to ensure redundancy. Perform each step on each side before moving

NOTE: Make sure you also make all changes to the VIO and LPAR profile after the changes

are done dynamically. Failure to do this will cause the setting to revert back when the VIO or

LPAR is next power cycled.

1) Check to see if the new LUN is available on the VIO.

a. Log onto the VIO server as the padmin user.

b. Have the VIO scan for the new LUN: *cfgdev*

c. Check for the new LUN. You should see an hdisk\*\* without the PVID number: lspv

2) Prepare the disk for use. The following are done as the padmin user.

a. Create the new PV and get the PVID number: *chdev -dev hdisk\*\* -attr pv=yes*

b. Verify the above step. You should now see the PVID number: *lspv*

c. Change the reserve policy on the disk: c*hdev -dev hdisk\*\* -attr*

*reserve\_policy=no\_reserve*

d. Change the algorithm to round robin: *chdev -dev hdisk\*\* -attr algorithm=round\_robin*

3) Create the vhost via the HMC. Do this on both VIOs.

a. Log into the appropriate HMC as the hscroot user.

b. On left menu select: Systems Management->Servers->server name

c. In the main window select one of the VIOs you are working with.

d. From the popup menu or in the lower window select: Dynamic Logical Partitioning

->Virtual Adapters

e. In the new window select: Actions -> Create -> SCSI Adapter

f. The Virtual SCSI Adapter is the new Adapter ID.

i. Generally, on VIO1, try to create the device using the “3” followed by the LPAR ID number. For LPAR 14 the VIO1 Server SCSI will be 314. For VIO2, use “4” followed by the LPAR ID, like 414.

g. Select: “Only selected client partition can connect” and the appropriate client

h. For Connecting adapter ID, usually vio1 uses 3, vio2 uses 4.

i. Select OK on the Actions window and the Virtual Adapters window.

4) Verify the vhost is seen on the VIO. As the padmin user.

a. At the command line on each VIO, scan for the new vhosts device: *cfgdev*

b. Verify they are there: *lsdev | grep vhost*

c. Or use: *lsmap –all* You will see the vhost\* with the VTD as “NO VIRTUAL TARGET

DEVICE FOUND”.

d. Note: in the lsmap, on the line with the vhost\*, there is an ID number. The C\*\* will

correspond to the Adapter ID number created with the HMC in the above steps.

5) Create the vhosts device.

a. At the command line on each VIO, as the padmin user, create the virtual device

and adapter to associate with the new vhost: *mkvdev -vdev hdisk\*\* -vadapter*

*vhost\*\* -dev hostname\_\*\*vg\_v*

i. The hdisk is the new LUN set up in steps 1 and 2. The vadapter is the vhost create in steps 3 and 4. The dev or device name is usually the client hostname, the volume

group it will be used on the client, and a “v “ for virtual. This is the VTD,

Virtual Target Device. Note that the VTD name is limited to 15 characters.

b. Verify that the new vhost now has the vdevice and hdisk with it. lsmap –all

6) Create the device for the client LPAR via the HMC. These steps are very similar to those to

create the vhost on the VIO side.

a. Log into the appropriate HMC as the hscroot user.

b. On left menu select: Systems Management->Servers->server name

c. In the main window select the client LPAR you are working on.

d. From the popup menu or in the lower window select: Dynamic Logical Partitioning

->Virtual Adapters

e. In the new window select: Actions -> Create -> SCSI Adapter

i. Virtual SCSI adapter is the Adapter ID, which is also the VIO Connecting Adapter. This is also the C\*\* number from the lsmap command.

ii. Server Partition is VIO1 or VIO2.

iii. Server adapter ID is the connecting Adapter, which is also the VIO Adapter ID.

iv. Do this for the same device on each VIO. This will give the device a path via each VIO.

7) Create the device on the client LPAR.

a. Log onto the host and become root.

b. Check the current list of PVs: lspv

c. Scan for the new device: cfgmgr

i. If the device has not been presented properly you will see errors here.

d. Check for the new hdisk. The hdisk number may be different than on the VIO

server but the 16 character PVID will be the same. lspv

e. Create the new VG/LV or add to existing as needed.

8) Make the changes in the VIO and LPAR profiles. The steps are similar to those used to

dynamically create the new devices.

a. Log into the appropriate HMC as the hscroot user.

b. On left menu select: Systems Management->Servers->server name

c. In the main window select one of the VIOs you are working with.

d. From the popup menu or in the lower window select: Configuration->Manage

Profiles

e. In the new window select the profile noted as “Last Activated”.

f. Select: Actions->Edit

g. Select the Virtual Adapters tab.

h. Select:Actions->Create->SCSI Adapters

i. Use the same numbers used for the Virtual SCSI Adapter, Client adapter ID, and the

client partition as used for the dynamic steps above for that VIO.

i. One hint, open the window for the Dynamic Logical Partitioning along with the Profile window to ensure they match.

j. Select:”This adapter is required for partition activation”, then “OK”

k. After all of the new devices are created for that VIO, do the same for the other VIO

and the LPARS.

l. Make sure you select “OK” at each window to save the changes.