Helpful:

<http://www.unixwerk.eu/aix/ios-howto.html#C1>

GUI install of VIO ( not tested)

<http://ibmsystemsmag.blogs.com/aixchange/2013/05/vios-installation-via-gui.html>

After installing VIO:

lscfg | grep ent or lsdev -type adapter

make sure cable goes to slot for ent0 and setup IP address to get off the crappy terminal

smitty tcpip

for now on each node, pair  it like this:   
ent4 (C5-T1 )/ent 6 (C6-T1)  for primary public interface

ent0 and ent2 for the interconnect

C7-T1 and C7-T3

Now Make the etherchannel and SEA :

Add a virtual adapter on VIO and LPAR, use 99 or as VLAN. Don’t need the LPAR up for this. shut VIO all the way down and then activate. Verify:

lsdev -virtual |grep ent

make the etherchannel, use 2 separate physicals

mkvdev -lnagg ent0 -attr backup\_adapter=ent2

create the SEA with the etherchannel as the physical and the virtual we created as the default <VIRT> argument

mkvdev -sea ent5 -vadapter ent4 -default ent4 -defaultid 99

note: if we set ent4 up with an IP address, will need to delete first then put back on the SEA

rmtcpip -interface en4

check the SEA , check for real and virtual adapter

lsdev -dev ent9 –attr

shutdown and restart the VIO to make sure it all comes back up

the SEA will show the real and virtual adapters, if we did etherchannel the real adapter will be that device

# lsattr -El entX | egrep "pvid|ent"

accounting disabled Enable per-client accounting of network statistics True

large\_receive no Enable receive TCP segment aggregation True

largesend 0 Enable Hardware Transmit TCP Resegmentation True

pvid 99 PVID to use for the SEA device True

pvid\_adapter ent4 Default virtual adapter to use for non-VLAN-tagged packets True

real\_adapter ent5 Physical adapter associated with the SEA True

virt\_adapters ent4 List of virtual adapters associated with the SEA (comma separated) True

ent5 is an aggregate of 2 physical devices:

# lsattr -El ent5 | grep adap

adapter\_names ent0 EtherChannel Adapters True

backup\_adapter ent2 Adapter used when whole channel fails True

Get further info on the SEA and EtherChannel device ( query the **SEA** adapter to get this)

entstat -d entX | egrep -i "active|back|eth"

If etherchannel stuff is f\*\*D up, try these steps to re create:the

1. delete all virtual, SEA, and etherchannel devices from VIO OS

lsdev -virtual |grep ent

2. shutdown VIO LPAR completely

3. check physical slots to make sure you have 2 physical eths on differnt actual slots to use:

4. setup the virtual adapater on the VIO server (HMC) then stop and start it

5. you will now see a Virt Eth adapter when the VIO comes up (ent6).

6. repeat same steps on client LPAR but do not bring up this LPAR yet

7. create the etherchannel: ( REMEMBER TO DO THIS ON CONSOLE)

bprdeaxvio02.main.corp.int$ mkvdev -lnagg ent0 -attr backup\_adapter=ent2

ent5 Available

bprdeaxvio01.main.corp.int$ lsdev -dev ent5 -attr

8: create the SEA ( use the etherchannel as the sea (physical) adapter

bprdeaxvio01.main.corp.int$ mkvdev -sea ent5 -vadapter ent4 -default ent4 -defaultid 99

ent6 Available

ntstat -all ent6 | grep Active

9. configure the ip addr, etc on the SEA device

**if cant get rid of virtual eth device in the current config: do this**:

1. remove all devices associated from LPAR in LPAR OS

2. shutdown LPAR

3. remove from profile ( DONT SAVE CURRENT CONFIG)

4. activate profile - now check current config under properties. should be gone now

Build Client LPAR with virtual devices for the NIC ( associate with the SEA from the VIO) and a vSCSI for the DVD virtual device. If NPIV is not set up yet, map a local drive from VIO to the LPAR we can move it later.

Add a vSCSI to VIO and LPAR profiles with same adapater ID

Setup and Load OS on the LPAR

Copy the ISO File from bprdeaxvio05: mksysb-cst-6100-07.iso to your VIO server

create the virtual DVD opt device and map it for the LPAR to use:

mkrep -sp rootvg -size 5G

mkvopt -name mksysb-cst-6100-07 -file ./mksysb-cst-6100-07.iso

lsrep ( will show the repo with the ISO device )

mkvdev -fbo -vadapter vhost0

loadopt -disk mksysb-cst-6100-07 -vtd vtopt0

If we are building the LPAR straight through NPIV:

Create the client LPAR: Add virtual devices for the NIC, vopt device ( just a regular virtual SCSI ) and 2 Virtual Fibre Channel adapters. Now add the fiber devices to the VIO using same slot numbers at the LPARs and reboot the VIO

login to the VIO server and map the Virtual FC devices:

lsnports ( shows your physical adapters) ( fabric = 1 )

lsdev -vpd | grep fcs ( look at physical slots )

lsdev -vpd |grep vfchost ( check the 2 FC virtual devices are there and slot number)

vfcmap -vadapter vfchost0 -fcp fcs0 ( map the first FC card to the virtual)

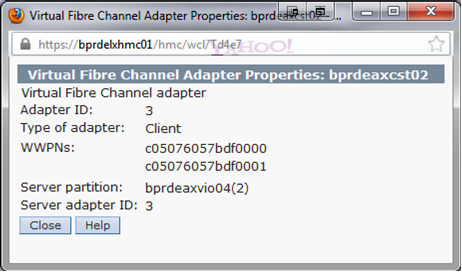
vfcmap -vadapter vfchost1 -fcp fcs2 ( and the second one )

lsmap -vadapter vfchost0 –npiv (check it, it will say “LOGGED off” until the client LPAR is up)

lsmap -all –npiv ( checks all )

**lscfg -vpl fcs0 |grep Network ( run from LPAR to get WW)**

Boot the client LPAR up in SMS mode, when it comes up, go into the properties of the FC client adapters and get the WWNs of each one and give to storage admin



While still in SMS console go to “boot options”, select option 4 ( SAN) select the first adapter and hit enter, this will activate it and stew will see it, have him present your OS Luns

When that is done select the DVD device as you normally would to boot off of. MAY HAVE TO boot into “default boot list” instead of SMS. Start your install and select one of the devices that stew presented to install the image to. After the install is done, storage guy can zone the other fiber..

Making an ISO image:

1) rmdev -l cd0  
   2) chdev -a max\_transfer=0x80000 -l cd0  
   3) cfmgr -l cd0