Step-By-Step Guide to Creating Virtual i Partitions Hosted by IBM i

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iTech Solutions because IBM i (AS/400’s) didn’t come with System Administrators.
What we will cover

This is a step by step approach to building virtual IBM i partitions on your IBM i. You won’t require any additional hardware, and you will be able to perform this in about 4 hours. You will be able to use these slides to build your own partitions, just make sure the minimum requirements have been met.
Agenda

- Introduction
- Create Virtual SCSI Server on Hosting Partition
- Create NEW IBM i Client Partition (Hosted / Guest)
- Create Network Server & Storage on Hosting Partition.
- Start the partition from the HMC
- Add additional Disks
- Other devices to configure/ manage
- Summary
Multiple Ways to Host Partitions

- **IBM i**
  - Same skill sets you already have and are familiar with
  - Can only share CEC DVD “virtually” with 6.1
  - Can share CEC Tape with 7.1 TR2 (and above)
  - No Reload Required **

- **VIOS (Virtual I/O Server)**
  - Requires some knowledge of AIX
  - Used to have more flexible – Internal DVD and Tape Sharing
  - Save and Restore of existing partition required !
  - External Disk  Fantastic
  - Live Partition Mobility
Partition Uses

- Development partitions.
- Web Partitions.
- Test the next release of the operating system.
- Test the next release of your application software.
- Just about anything you need.
What we wish to accomplish

• Create a Virtual i partition without any additional hardware
• “Carve out” storage from our existing disk allocation on the hosting partition.
• Great way to create a test environment
• Can be IBM i 7.3, 7.2, 7.1, or 6.1
Requirements

- HMC* on Version 7.x or 8.x
- POWER6, POWER7, or POWER8 hardware
- IBM i 6.1, 6.1.1, 7.1, 7.2, or 7.3
- I_BASE_01 DVD or SAVSYS tape for loading LIC
- Enough disk space in the hosting partition to create our required Network Storage Space (NWSSTG)
- External Optical Device or can share the Internal Optical in the CEC if owned by Hosting partition.
- Ethernet: Host Ethernet Adapter port, Bridging or Virtual Lan Connection, physical adapter.
Visual description

IBM i Host

IBM i Client

DDxx

Virtual SCSI connection

OPTxx

DVD

Virtual LAN connection

CMNxx

NWSSTGs

OPTxx

IVE

dddxx

dddxx

dvd
Step by Step approach

• What I used (Note: These are not the minimums)
  • My HMC was at 7.7.6
  • Power7 8202-E4B 720 with six processors (You can do this with just one processor).
  • IBM i 7.1 on both Hosting and Hosted partitions.
  • 7.1 I_BASE_01 DVD
  • 16GB of memory
  • 2 TB of disk
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Get on your HMC
Select the Server from your HMC
Select Partition Properties

**Partition Properties - Hosting1**

- **Name:** Hosting1
- **ID:** 1
- **Environment:** IBM i
- **State:** Running
- **Attention LED:** Off
- **Resource configuration:** Configured
- **OS version:** IBM i Licensed Internal Code 7.1.0 410 0
- **Current profile:** iTech07
- **System:** 8202-E4B*102BC2P

- Allow performance information collection
- Allow this partition to be suspended.
- RestrictedIO Partition
Virtual Adapters

Virtual resources allow for the sharing of physical hardware between logical partitions. The current virtual adapter settings are listed below.

Maximum virtual adapters: 8
Number of virtual adapters: 2

<table>
<thead>
<tr>
<th>Select</th>
<th>Type</th>
<th>Adapter ID</th>
<th>Server/Client Partition</th>
<th>Partner Adapter</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Server Serial</td>
<td>0</td>
<td>Any Partition</td>
<td>Any Partition Slot</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Server Serial</td>
<td>1</td>
<td>Any Partition</td>
<td>Any Partition Slot</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Total: 2  Filtered: 2  Selected: 0
Create Virtual Adapter

- On the Hosting Partition
- Create a Virtual SCSI Server Adapter
- Two ways
  - Dynamically
  - Regular
- Dynamically allows us to do this without a reboot - but MUST add later.
- This allows the communication from the Hosting partition. We will later “marry” this to a Virtual SCSI Client Adapter on the Client (Hosted) Partition.
- Write down the Slot number.
Dynamically add Virtual Adapter

Hardware Management Console

<table>
<thead>
<tr>
<th>Select</th>
<th>Name</th>
<th>ID</th>
<th>Status</th>
<th>Processing Units</th>
<th>Memory (GB)</th>
<th>Active Profile</th>
<th>Environment</th>
<th>Reference Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GAF</td>
<td>6</td>
<td>Not Activated</td>
<td>0.1</td>
<td>1</td>
<td>OAF</td>
<td>IBMi</td>
<td>0000000000</td>
</tr>
<tr>
<td></td>
<td>Hosting</td>
<td>7</td>
<td>Not Activated</td>
<td>0</td>
<td>0</td>
<td></td>
<td>IBMi</td>
<td>0000000000</td>
</tr>
</tbody>
</table>

Tasks for Hosting1

- Properties
- Change Default Profile
- Operations
- Reboot
- Shut Down
- Deactivate Attention LED
- Schedule Operations
- Pause Operations
- Configuration
- Manage Profiles
- Manage Custom Groups
- Save Current Configuration
- Hardware Information
- Dynamic Logical Partitioning
- Serviceability

Status: OK

Read 172.29.6.12
Create Virtual SCSI Server Adapter

Document the Slot number
What we created: SCSI Virtual Server Adapter

![Image of Logical Partition Profile Properties](https://172.29.6.12/hmc/wcl/T7ddf)

Virtual resources allow for the sharing of physical hardware between logical partitions. The current virtual adapter settings are listed below.

**Maximum virtual adapters:** 10

**Number of virtual adapters:** 3

<table>
<thead>
<tr>
<th>Select</th>
<th>Type</th>
<th>Adapter ID</th>
<th>Server/Client Partition</th>
<th>Partner Adapter</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Server SCSI</td>
<td>2</td>
<td>Any Partition</td>
<td>Any Partition Slot</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Server Serial</td>
<td>0</td>
<td>Any Partition</td>
<td>Any Partition Slot</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Server Serial</td>
<td>1</td>
<td>Any Partition</td>
<td>Any Partition Slot</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Total: 3  Filtered: 3  Selected: 0
Remember

• You must go back to Edit the existing profile and ADD the Virtual SCSI Server adapter to the Hosting partition for the same slot.
Virtual Resource on the Hosting Partition

• From a 5250 screen on the Hosting partition, we need to identify which IBM i hardware resource is created for the Virtual SCSI Server adapter.

• Note we will use the WRKHDWRSC *CMN. Look for the 290B Type of resource.
From a session on your Existing partition (Hosting)

Session C - [24 x 80]

Select one of the following:

Manual Install
  1. Install all

Preparation
  5. Prepare for install

Licensed Programs
  10. Display installed licensed programs
  11. Install licensed programs
  12. Delete licensed programs
  13. Save licensed programs

Selection or command

```bash
wrkhdwrsc *cmn
```

More...

F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F16=System Main menu

20/007

I902 - Session successfully started
Look for the 290B Resource to Display Resource Detail
• In my case it shows V1-C2. V is Virtual and the C2 is for Slot 2 that matches Slide 18 Create Virtual SCSI Server Adapter.
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• Summary
Create IBM i Client Partition
Create Guest IBM i Partition (Hosted i)

This wizard helps you create a new logical partition and a default profile for it. You can use the partition properties or profile properties to make changes after you complete this wizard.

To create a partition, complete the following information:

System name: iTech-Power7
Partition ID: 2
Partition name: Client

- Allow this partition to be suspended.
- Restricted IO partition

Use your partition Name
Partition Profile

A profile specifies how many processors, how much memory, and which I/O devices and slots are to be allocated to the partition.

Every partition needs a default profile. To create the default profile, specify the following information:

- System name: iTech-Power7
- Partition name: Client
- Partition ID: 8
- Profile name: Client

This profile can assign specific resources to the partition or all resources to the partition. Click Next if you want to specify the resources used in the partition. Select the option below and then click Next if you want the partition to have all the resources in the system.

- Use all the resources in the system.
Shared or Dedicated Processors

You can assign entire processors to your partition for dedicated use, or you can assign partial processor units from the shared processor pool. Choose one of the processing modes below.

- **Shared**
  - Assign partial processor units from the shared processor pool. For example, .50 or 1.25 processor units can be assigned to the partition.

- **Dedicated**
  - Assign entire processors that can only be used by the partition.
Choose your Processing needs

Create Lpar Wizard : iTech-Power7 - Mozilla Firefox

Processing Settings

Specify the desired, minimum, and maximum processing settings in the fields below.

- Total usable processing units: 6.00
- Minimum processing units: 0.1
- Desired processing units: 0.2
- Maximum processing units: 0.3
- Shared processor pool: iTech-shared01 (1)

Virtual processors

- Minimum processing units required for each virtual processor: 0.10
  - Minimum virtual processors: 1
  - Desired virtual processors: 1
  - Maximum virtual processors: 1

Uncapped weight: 128.0
Enter Memory for partition
Choose any I/O Required

Detailed below are the physical I/O resources for the managed system. Select which adapters from the list you would like included in the profile and then add the adapters to the profile as Desired or Required. Click on an adapter to view more detailed adapter information.

<table>
<thead>
<tr>
<th>Location Code</th>
<th>Description</th>
<th>Added</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>U78AA.001.WIH0062-P1-T9</td>
<td>RAID Controller</td>
<td></td>
<td>512</td>
</tr>
<tr>
<td>U78AA.001.WIH0062-P1-T7</td>
<td>Universal Serial Bus UHC Spec</td>
<td></td>
<td>513</td>
</tr>
<tr>
<td>U78AA.001.WIH0062-P1-C19</td>
<td>RAID Controller</td>
<td></td>
<td>514</td>
</tr>
<tr>
<td>U78AA.001.WIH0062-P1-C4</td>
<td>PCI-E SAS Controller</td>
<td></td>
<td>516</td>
</tr>
<tr>
<td>U78AA.001.WIH0062-P1-C5</td>
<td>Empty slot</td>
<td></td>
<td>517</td>
</tr>
<tr>
<td>U78AA.001.WIH0062-P1-C6</td>
<td>Empty slot</td>
<td></td>
<td>518</td>
</tr>
<tr>
<td>U78AA.001.WIH0062-P1-C7</td>
<td>Empty slot</td>
<td></td>
<td>519</td>
</tr>
</tbody>
</table>

Total: 7  Filtered: 7
Virtual Adapters

Virtual resources allow for the sharing of physical hardware between logical partitions. The current virtual adapter settings are listed below.

Maximum virtual adapters: **10**
Number of virtual adapters: 2

<table>
<thead>
<tr>
<th>Select</th>
<th>Type</th>
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<td></td>
<td>Server</td>
<td>0</td>
<td>Any Partition</td>
<td>Any Partition Slot</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Server</td>
<td>1</td>
<td>Any Partition</td>
<td>Any Partition Slot</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Total: 2  Filtered: 2  Selected: 0
Create Virtual SCSI CLIENT Adapter
Create Virtual SCSI Client Adapter

- Select the Server partition which we created the Virtual SCSI Server Adapter
- Match the Server Adapter ID with the adapter number created in Virtual SCSI Server Adapter, slide # 18.

![Image of iTechHMC1: IBM i - Mozilla Firefox](https://172.29.6.12/hmc/wcl/T7ec8)

Virtual SCSI adapter
Adapter: 2
Type of adapter: Client

- This adapter is required for partition activation.
- Server partition: Hosting1(1)
- Server adapter ID: 2

![Tip](https://itechsol.com)

![Where to Find It](https://itechsol.com)

Must Match page 18 values
Verify Adapter Number and Partition

Virtual Adapters

Virtual resources allow for the sharing of physical hardware between logical partitions. The current virtual adapter settings are listed below.

Maximum virtual adapters: 10
Number of virtual adapters: 3

Select: [ ] Client SCSI 2 Hosting1(1) 2 Any Partition Slot Yes
Select: [ ] Server Serial 0 Any Partition Any Partition Slot Yes
Select: [ ] Server Serial 1 Any Partition Any Partition Slot Yes

Total: 3 Filtered: 3 Selected: 0

Checklist
Ethernet will depend on machines & adapters

- Host Ethernet Adapter Slides 38
- Power8, Power7 C & D models have no Host Ethernet Adapters – Will use Ethernet Layer-2 Bridging. Host must be 7.1 TR3 or later. See Slides 41 to 45

This works by putting two Ethernet adapters (one physical, one virtual) into a mode where they can receive traffic that is not specifically destined for their address, and selectively sending those frames onto the other network. Because of this, frames transmitted by virtual Ethernet adapters on the same vlan as the bridging virtual Ethernet adapter can be sent to the physical network, and frames from the physical network can be received by adapters on the virtual network.
Logical Host Ethernet Adapters: Add Adapter

To configure a Logical Host Ethernet Adapter (LHEA) for this partition profile, select an HEA physical port in the table below and then click Configure to enter the appropriate information. Select Reset to undo this.

<table>
<thead>
<tr>
<th>Select</th>
<th>Physical Port Location Codes</th>
<th>Physical Port ID</th>
<th>Port Group</th>
<th>Logical Port IDs</th>
<th>Allowed VLAN IDs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U789C.001.DQD3V98-P1 - C7-T1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>U789C.001.DQD3V98-P1 - C7-T2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>U789C.001.DQD3V98-P1 - C7-T3</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>U789C.001.DQD3V98-P1 - C7-T4</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Choose Logical Port

Logical Host Ethernet Adapter (LHEA) Configuration - V7R1TR1

Logical Port configuration
Use the fields below to specify a logical port and allowed VLAN IDs.

Choose Logical Port: Logical Port 4 (Client)

VLAN ID Restrictions
- Allow all VLAN IDs
- Specify Allowable VLAN IDs

MAC Address Restrictions
- Allow all O/S Defined MAC Addresses
- Deny all O/S Defined MAC Addresses
- Specify Allowable O/S Defined MAC Addresses
Configure Ethernet (Side note on HEA)

HEA Physical Port Configuration: iTech-Power7

Use the fields below to specify the configuration for the selected physical port.

- **Speed:**
  - Auto
- **Duplex:**
  - Auto
- **Maximum receiving packet size:**
  - 1500 non-jumbo fra
- **Pending Port Group Multi-Core Scaling value:**
  - 4
- **Promiscuous LPAR:**
  - --(None)--

Flow control enabled

[OK] [Cancel] [Help]
Virtual Ethernet

Partition 1:
- LIND
- Ethernet 57xx
- Virtual Ethernet 268C
  - Access external network

Partition 2:
- Virtual Ethernet

Partition 3:
- Virtual Ethernet

IBM i

Network

Virtual Ethernet
Ethernet Bridging
On Host Partition (out of Sequence)
Host Partition Find 268C

Work with Communication Resources

System: ITECH07

Type options, press Enter.
5 = Work with configuration descriptions  7 = Display resource detail

<table>
<thead>
<tr>
<th>Opt</th>
<th>Resource</th>
<th>Type</th>
<th>Status</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>_</td>
<td>CTL03</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>_</td>
<td>CMB09</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>_</td>
<td>CTL04</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>_</td>
<td>CMB10</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>_</td>
<td>CTL05</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>_</td>
<td>CMB11</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>_</td>
<td>CTL06</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>_</td>
<td>CMB12</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>_</td>
<td>CTL07</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>_</td>
<td>CMB14</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>_</td>
<td>CTL08</td>
<td>290B</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>_</td>
<td>CMB15</td>
<td>268C</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>_</td>
<td>LIN05</td>
<td>268C</td>
<td>Operational</td>
<td>LAN Adapter</td>
</tr>
<tr>
<td>_</td>
<td>CMN07</td>
<td>268C</td>
<td>Operational</td>
<td>Ethernet Port</td>
</tr>
</tbody>
</table>

F3 = Exit  F5 = Refresh  F6 = Print  F12 = Cancel

20/06/3

Connected to remote server host 172.28.6.12 using port 2300
Create the Bridge on Host to Virtual Network

Type choices, press Enter.

Line description .................. \( \rightarrow \) ETHBRIDG1     Name
Resource name .......................... \( \rightarrow \) CMN07     Name, *AGG, *NWID, *NWSD
Bridge identifier .................. \( \rightarrow \) BRIDGE1  Name, *NONE
Online at IPL ........................*YES  *YES, *NO
Vary on wait ........................*NOWAIT  *NOWAIT, 15-180 seconds
Local adapter address ...............*ADPT  020000000000-FFFFFF0000...
Exchange identifier .................*SYSGEN  05600000-056FFFF, *SYSGEN
Ethernet standard ..................*ETHV2  *ETHV2, *IEEE8023, *ALL
Line speed ..........................*AUTO  10M, 100M, 1G, 10G, *AUTO
Duplex ...............................*AUTO  *HALF, *FULL, *AUTO
Serviceability options .............*NONE  Character value, *NONE

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
Create the Bridge on Host to Physical Network

Create Line Desc (Ethernet) (CRTLINETH)

Type choices, press Enter.

- Line description
- Resource name
- Bridge identifier
- Online at IPL
- Vary on wait
- Local adapter address
- Exchange identifier
- Ethernet standard
- Line speed
- Duplex
- Serviceability options

Choices:
- ETHBRIDGP1
- CMN12
- BRIDGE1
- *YES
- *NOWAIT
- *ADPT
- *SYSGEN
- *ETHV2
- *AUTO
- *NONE

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
Select OptiConnect Settings

Just click next here

You may set the OptiConnect settings below or just click Next to skip this step.

- [ ] Use virtual OptiConnect
- [ ] Use High Speed Link (HSL) OptiConnect
Tagged I/O

- Tagged I/O is where we describe which resources will be used for the Load Source, Alternative Restart Device, and Console.
- For the Console we will select HMC
- For the Load Source we will select the Virtual SCSI Client Adapter we created in this partition.
- For the Alternative Restart Device (Alternative IPL Device) we will choose either the same Virtual SCSI Client Adapter if the hosting partition owns the embedded disk controller in the CEC or an adapter that has an external DVD/Tape attached.
Tagged I/O devices for this partition profile are detailed below.

**Load source**
- Client SCSI Slot 2

**Alternate restart device**
- Client SCSI Slot 2

**Console**
- Hardware Management Console

**Alternate console**
- None

**Operations Console**
- None
Optional Settings

Select optional settings for this partition profile using the fields below.

- [ ] Enable connection monitoring
- [ ] Automatically start with managed system
- [ ] Enable redundant error path reporting
- [ ] Enable Electronically report errors that cause partition termination or require attention
Profile Summary: Verify your settings

Create Lpar Wizard: iTech-Power7 - Mozilla Firefox

Profile Summary

This is a summary of the partition and profile. Click Finish to create the partition and profile. To change any of your choices, click Back. You can see the details of the physical I/O devices you chose by clicking Details.

You can modify the profile or partition by using the partition properties or profile properties after you complete this wizard.

<table>
<thead>
<tr>
<th>Partition ID:</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition name:</td>
<td>Client</td>
</tr>
<tr>
<td>Partition environment:</td>
<td>IBM i</td>
</tr>
<tr>
<td>Profile name:</td>
<td>Client</td>
</tr>
</tbody>
</table>

| Desired memory: | 2.00 GB | 0.00 MB |
| Desired processing units: | 0.20 |
| Physical I/O devices: | 0 |

Load source: Virtual slot number 2
Location code:
Console: Using the management console
Location code:
Alternate restart device: Virtual slot number 2
Location code:

Virtual I/O adapters:
1. Ethernet
2. SCSI
1. Serial
0. Fibre Channel
We now have a new Partition
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• Summary
On the Hosting partition

Manual Install
  1. Install all

Preparation
  5. Prepare for install

Licensed Programs
  10. Display installed licensed programs
  11. Install licensed programs
  12. Delete licensed programs
  13. Save licensed programs

Selection or command
==> crtnwsd

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
F16=System Main menu
Already at top of area.

11/052

3: 1902 - Session successfully started
Create Network Server

- Network server description: CLIENT
- Resource name: CTL02
- Network server type: *GUEST
- Server connection: *GUEST
- Server operating system: *OPSYS
- Online at IPL: *YES
- Vary on wait: *NOWAIT
- Shutdown timeout: *TYPE
- Partition: *NONE
- Partition number: 8
- Code page: *LANGVER
- Server message queue: *JOBLOG
- Library: *BASE
- Pool identifier: *SHRPPOOL1

More...
CRTNWSD (continued)

Type choices, press Enter.

TCP/IP port configuration:
- Port ..................... *NONE, 1, 2, 3, 4...
- Internet address ...........
- Subnet mask ..............
- Maximum transmission unit .. Number
- Gateway address ...........

TCP/IP route configuration:
- Route destination .......... *NONE
- Subnet mask ..............
- Next hop .................

TCP/IP local host name ....... *NWSD

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys

More...

MA C MW
05/035
Session C - [24 x 80]
CRTNWSD (continued)

Session C - [24 x 80]

Create Network Server Desc (CRTNWSD)

Type choices, press Enter.

TCP/IP local domain name . . . . . . *SYS

TCP/IP name server system . . . . *SYS

+ for more values

Restricted device resources . . . *NONE

Name, *NONE, *ALL...

+ for more values

IPL source . . . . . . . . . . . . . . . *NWSSTG

*NWSSTG, *PANEL, *STMF, A...

IPL stream file . . . . . . . . . . . *NONE

IPL parameters . . . . . . . . . *NONE

Power control . . . . . . . . . > *NO

*YES, *NO

Serviceability options . . . . *NONE

Authority . . . . . . . . . . . *CHANGE

Name, *CHANGE, *ALL, *USE...

More...

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

MA: C  MW: 17/037

1902 - Session successfully started
Create Network Storage for our new partition

Select one of the following:

Manual Install
1. Install all

Preparation
5. Prepare for install

Licensed Programs
10. Display installed licensed programs
11. Install licensed programs
12. Delete licensed programs
13. Save licensed programs

More...

F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F16=System Main menu
Network server description CLIENT created.

MA       C        MW          20/017
[902 - Session successfully started]
Determine Size & Name of Storage Space (6.1, 7.1, 7.2 TR1 and above, and 7.3)

Create NWS Storage Space (CRTNWSSTG)

Type choices, press Enter.

Network server storage space . . > CLIENT1 Name
Size ................. > 39375 *CALC, 1-1024000 megabytes
From storage space . . . . . . > *NONE Name, *NONE
Data offset ............ > *FORMAT *FORMAT, *ALIGNLGLPTN...
Auxiliary storage pool ID . . . . . . 1 1-255
ASP device ............ > Name
Text 'description' ............... 'Virtual Disk for Client Partition'

Bottom

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
Creating NWS storage space CLIENT1: 704 of 39378 megabytes complete.

MA C X SYSTEM MW

1902 - Session successfully started
Associate Storage space to NWSD using WRKNWSSTG

Work with Network Server Storage Spaces

Type options, press Enter.
1=Create  2=Change  3=Copy  4=Delete  5=Display  6=Print  10=Add link
11=Remove link

<table>
<thead>
<tr>
<th>Opt</th>
<th>Name</th>
<th>Server</th>
<th>Seq</th>
<th>Link</th>
<th>Type</th>
<th>Access</th>
<th>Stg</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>CLIENT1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameters or command

F3=Exit    F4=Prompt    F5=Refresh    F6=Print list    F9=Retrieve
F11=Display disk status    F12=Cancel    F17=Position to

MA     C     MW     21/007

I902 - Session successfully started
Adding Server Storage

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network server storage space</td>
<td>CLIENT1</td>
</tr>
<tr>
<td>Network server description</td>
<td>CLIENT</td>
</tr>
<tr>
<td>Dynamic storage link</td>
<td>*YES</td>
</tr>
<tr>
<td>Network server type</td>
<td>*NWSD</td>
</tr>
<tr>
<td>Access</td>
<td>*UPDATE</td>
</tr>
<tr>
<td>Drive sequence number</td>
<td>*CALC</td>
</tr>
<tr>
<td>Storage path number</td>
<td>*DFTSTGPTH</td>
</tr>
</tbody>
</table>

Bottom

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display  F24=More keys

05/037

1902 - Session successfully started
## Vary on Network Server Description

Vary on Network Server Description

<table>
<thead>
<tr>
<th>Opt</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CLIENT</td>
<td>VARIED OFF</td>
</tr>
</tbody>
</table>

Type options, press Enter.

1=Vary on  2=Vary off  5=Work with job  8=Work with description
9=Display mode status  13=Work with APPN status...

Bottom

Parameters or command

F3=Exit  F4=Prompt  F12=Cancel  F23=More options  F24=More keys
Everything is good status is Active – But not yet up.

```
Session C - [24 x 80]

Position to . . . .        ________ Starting characters

03/24/13 Hosting

Type options, press Enter.
  1=Vary on  2=Vary off  5=Work with job  8=Work with description
  9=Display mode status  13=Work with APPN status...

Opt  Description  Status
    CLIENT        ACTIVE

Parameters or command

F3=Exit  F4=Prompt  F12=Cancel  F23=More options  F24=More keys

MA   C   MW   A
 39   10/002

I902 - Session successfully started
```
Agenda

• Introduction
• Create Virtual SCSI Server on Hosting Partition
• Create NEW IBM i Client Partition (Hosted / Guest)
• Create Network Server & Storage on Hosting Partition.
• Start the partition from the HMC
• Add additional Disks
• Other devices to configure/manage
• Summary
Check Client Partition Properties

- Ensure IPL Source is D
- Keylock position is Manual
- Place the I_BASE_01 DVD into the correct Alternate IPL device for the partition.
Activate our new partition
Start your console as well

Activate Logical Partition: Client

Select a profile below to activate the logical partition with.

Partition name: Client

Partition profiles

Open a terminal window or console session

[Options]

OK  Cancel  Help
Light on DVD Drive should be flashing
Is everything ok?

It’s normal for the Reference Code to go to 0000000 and the console to be blank for 3 to 5 minutes… just hang in we are almost there
Success !!!!
Ready to Install LIC

Install Licensed Internal Code

Select one of the following:

1. Install Licensed Internal Code
2. Work with Dedicated Service Tools (DST)
3. Define alternate installation device

Selection

1

Licensed Internal Code - Property of IBM 5770-999 Licensed Internal Code (c) Copyright IBM Corp. 1980, 2010. All rights reserved. US Government Users Restricted Rights - Use duplication or disclosure restricted by GSA ADP schedule Contract with IBM Corp.
Select the Load Source Disk

Select Load Source Device

Type 1 to select, press Enter.

<table>
<thead>
<tr>
<th>Opt</th>
<th>Serial Number</th>
<th>Type</th>
<th>Model</th>
<th>Sys</th>
<th>Sys Card</th>
<th>I/O</th>
<th>I/O Bus</th>
<th>Ctl</th>
<th>Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>YG98YEFZYWYW</td>
<td>6B22</td>
<td>050</td>
<td>255</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

F3=Exit  F5=Refresh  F12=Cancel
Install LIC and Initialize the system

Disk selected to write the Licensed Internal Code to:

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Type</th>
<th>Model</th>
<th>I/O Bus</th>
<th>Controller</th>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>YG98YEFZYWYW</td>
<td>6822</td>
<td>050</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Select one of the following:

1. Restore Licensed Internal Code
2. Install Licensed Internal Code and Initialize system
3. Install Licensed Internal Code and Recover Configuration
4. Install Licensed Internal Code and Restore Disk Unit Data
5. Install Licensed Internal Code and Upgrade Load Source

Selection

2

F3=Exit      F12=Cancel
Confirmation F10

Warning:
All data on this system will be destroyed and the Licensed Internal Code will be written to the selected disk if you choose to continue the initialize and install.

Return to the install selection screen and choose one of the other options if you want to perform some type of recovery after the install of the Licensed Internal Code is complete.

Press F10 to continue the install.
Press F12 (Cancel) to return to the previous screen.
Press F3 (Exit) to return to the install selection screen.

F3=Exit    F10=Continue    F12=Cancel
Initialize the Disk - Status

The load source disk is being initialized.

Elapsed time in minutes . . . . . . . . . : 0.0

Please wait.

Wait for next display or press F16 for DST main menu

Connected to remote server/host 192.168.10.225 using port 2300
Installing the Licensed Internal Code

Install of the Licensed Internal Code in progress.

Percent complete: 15%

Elapsed time in minutes: 1.0

Please wait.

Wait for next display or press F16 for DST main menu.
When finishes loading LIC the Console goes blank but continues to IPL
Back to Console and Accept with F10

Type option, press Enter.
  5=Display Detailed Report

Press F10 to accept all the following problems and continue.
The system will attempt to correct them.

Opt  Problem
  New disk configuration

F3=Exit   F10=Accept the problems and continue   F12=Cancel
Install the Operating System

IPL or Install the System

Select one of the following:

1. Perform an IPL
2. Install the operating system
3. Use Dedicated Service Tools (DST)
4. Perform automatic installation of the operating system
5. Save Licensed Internal Code

Selection

2

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Connected to remote server/host 172.29.6.12 using port 2300
Put B2924_01 (6.1) GROUPx-01 (7.x) in DVD if selecting #2

Install Device Type Selection

Select the installation device type:

1. Tape
2. Optical
3. Virtual device - preselected image catalog
4. Current alternate selected device
5. Network device

Selection: 2

F3=Exit  F12=Cancel
Installing the Operating System

Type options, press Enter.

Install
option . . . . . 2

1=Take defaults (No other options are displayed)
2=Change install options

Date:
Year . . . . . 13
Month . . . . 03
Day . . . . . 25

00–99
01–12
01–31

Time:
Hour . . . . . 08
Minute . . . . 52
Second . . . . 56

00–23
00–59
00–59

Stop

Connected to remote server/host: 172.29.6.12 using port: 2300
Specify OS Install Options

Type options, press Enter.

Restore option ........ 1
1=Restore programs and language objects from the current media set
2=Do not restore programs or language objects
3=Restore only language objects from current media set
4=Restore only language objects from a different media set using the current install device

Job and output queues option ........ 2
1=Clear, 2=Keep

Distribute operating system on available disk units.. 2
1=Yes, 2=No
Restore Options

Type options, press Enter.

Restore from the installation media

System information . . . . 1 1=Restore, 2=Do not restore
Edit descriptions . . . . 1 1=Restore, 2=Do not restore
Message reply list . . . . 1 1=Restore, 2=Do not restore
Job descriptions . . . . 1 1=Restore, 3=Keep customization
Subsystem descriptions . . 1 1=Restore, 3=Keep customization

VERY Important
Complete the restore of the OS

Stage 2: 16%

Installation Stage
1 Creating needed profiles and libraries... X

>> 2 Restoring programs to library QSYS... 02319

3 Restoring language objects to library QSYS...
4 Updating program table...
5 Installing database files...
6 Installing base directory objects...
Accept License Agreements

<table>
<thead>
<tr>
<th>Opt</th>
<th>Licensed Program</th>
<th>Product Option</th>
<th>Product Release</th>
<th>Accept Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>*MCHCOD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5770SS1</td>
<td>*BASE</td>
<td>V7R1M0</td>
<td>No</td>
</tr>
</tbody>
</table>

F3=Exit  F11=Display description  F12=Cancel  F13=Select language  F19=Display trademarks  F22=Restore software agreements

Connected to remote server/host 172.29.6.12 using port 2300
Agenda

• Introduction
• Create Virtual SCSI Server on Hosting Partition
• Create NEW IBM i Client Partition (Hosted / Guest)
• Create Network Server & Storage on Hosting Partition.
• Start the partition from the HMC
• Add additional Disks
• Other devices to configure/manage
• Summary
## Work with Disk Status

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Size (M)</th>
<th>Used</th>
<th>I/O Rqs</th>
<th>Request Size (K)</th>
<th>Read Rqs</th>
<th>Write Rqs</th>
<th>Read (K)</th>
<th>Write (K)</th>
<th>Busy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  6B22</td>
<td>36703</td>
<td>17.4</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>0</td>
</tr>
</tbody>
</table>

Elapsed time: 00:00:00

03/25/13 05:11:15

Command

F3=Exit   F5=Refresh   F12=Cancel   F24=More keys

Connected to remote server/host: 172.29.6.12 using port: 2300
Add another Virtual Disk on Hosting

Create NWS Storage Space (CRTNWSSTG)

Type choices, press Enter.

Network server storage space... > CLIENT2 Name
Size... 39375 *CALC, 1-1024000 megabytes
From storage space... *NONE Name, *NONE
Format... *OPEN *NTFS, *FAT, *FAT32, *OPEN...
Data offset... *FORMAT *FORMAT, *ALIGNLGLPTN...
Auxiliary storage pool ID... 1 1-255
ASP device... Name
Text 'description'... > 'Virtual Disk for Client Partition'

Bottom

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

Creating NWS storage space CLIENT2: 896 of 39378 megabytes complete.

05/037

I902 - Session successfully started
Add the Storage to the Server

Add Server Storage Link (ADDNWSSTGL)

Type choices, press Enter.

Network server storage space . . > CLIENT2 Name
Network server description . . > CLIENT Name
Dynamic storage link . . . . . > *YES *NO, *YES
Network server type . . . . . > *NWSD Character value
Access . . . . . . . . . . . . > *UPDATE *UPDATE, *READ, *SHRUPD
Drive sequence number . . . . > *CALC 1-64, *CALC, *OR
Storage path number . . . . > *DFTSTGPTH 1-4, *DFTSTGPTH, *MLTPTHTGRP
On the Client Partition – Here it is.

```
Work with Disk Status

Elapsed time: 00:00:00

<table>
<thead>
<tr>
<th>Unit</th>
<th>Type</th>
<th>Size</th>
<th>%</th>
<th>I/O</th>
<th>Request</th>
<th>Read</th>
<th>Write</th>
<th>Read</th>
<th>Write</th>
<th>Busy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6B22</td>
<td>36703</td>
<td>17.5</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>6B22</td>
<td>36703</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Command

F3=Exit  F5=Refresh  F12=Cancel  F24=More keys

Bottom

Connected to remote server/host 172.29.6.12 using port 2300
```
Add it to the ASP

### Specify ASPs to Add Units to

Specify the existing ASP to add each unit to.

<table>
<thead>
<tr>
<th>Specify</th>
<th>Serial Number</th>
<th>Type</th>
<th>Model</th>
<th>Capacity</th>
<th>Resource Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Y6YRZXXE WVYM</td>
<td>6B22</td>
<td>050</td>
<td>36703</td>
<td>DPH001</td>
</tr>
</tbody>
</table>

F3=Exit   F5=Refresh   F11=Display disk configuration capacity
F12=Cancel
# Multiple Disks in ASP

<table>
<thead>
<tr>
<th>Unit</th>
<th>Type</th>
<th>Size (M)</th>
<th>% Used</th>
<th>I/O</th>
<th>Request Size (K)</th>
<th>Read Rqs</th>
<th>Write Rqs</th>
<th>Read (K)</th>
<th>Write (K)</th>
<th>Busy %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6B22</td>
<td>36703</td>
<td>17.4</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>6B22</td>
<td>36703</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
<td>0</td>
</tr>
</tbody>
</table>

Elapsed time: 00:00:00

H1O2BC2P

03/25/13 05:27:29

Command

F3=Exit   F5=Refresh   F12=Cancel   F24=More keys

Connected to remote server/host 172.29.6.12 using port 2300
Agenda

• Introduction
• Create Virtual SCSI Server on Hosting Partition
• Create NEW IBM i Client Partition (Hosted / Guest)
• Create Network Server & Storage on Hosting Partition.
• Start the partition from the HMC
• Add additional Disks
• Other devices to configure/manage
• Summary
Create Ethernet Line Using 266D (HEA) or 268C (Bridge)

<table>
<thead>
<tr>
<th>Opt</th>
<th>Resource</th>
<th>Type</th>
<th>Status</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CMB02</td>
<td>268C</td>
<td>Operational</td>
<td>Combined function IOP</td>
</tr>
<tr>
<td>-</td>
<td>LIN04</td>
<td>6B26</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>-</td>
<td>CMN02</td>
<td>6B03</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>-</td>
<td>CMN01</td>
<td>6B03</td>
<td>Operational</td>
<td>Comm Port</td>
</tr>
<tr>
<td>-</td>
<td>CMB04</td>
<td>6B03</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>-</td>
<td>LIN02</td>
<td>6B03</td>
<td>Operational</td>
<td>Comm Adapter</td>
</tr>
<tr>
<td>-</td>
<td>CMN03</td>
<td>6B03</td>
<td>Operational</td>
<td>Comm Port</td>
</tr>
<tr>
<td>-</td>
<td>CMB05</td>
<td>268C</td>
<td>Operational</td>
<td>Comm Processor</td>
</tr>
<tr>
<td>-</td>
<td>LIN03</td>
<td>268C</td>
<td>Operational</td>
<td>LAN Adapter</td>
</tr>
<tr>
<td>-</td>
<td>CMN03</td>
<td>268C</td>
<td>Operational</td>
<td>Ethernet Port</td>
</tr>
</tbody>
</table>
Sharing Tape I/O Adapter between two partitions

- Identify the I/O Adapter to be shared
- Would you like to move the adapter via a CL Program?
- Needs to be varied off before moving
- Uses an id on the HMC to move the resource
Create User id on HMC

Doesn’t require more than HMC Operator role

<table>
<thead>
<tr>
<th>Select</th>
<th>User ID</th>
<th>Task Role</th>
<th>Resource Role</th>
<th>Authentication Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>hscroot</td>
<td>hmcsuperadmin</td>
<td>AllSystemResources</td>
<td>Local Authentication</td>
<td>HMC Super User</td>
</tr>
<tr>
<td></td>
<td>petem</td>
<td>hmcsuperadmin</td>
<td>AllSystemResources</td>
<td>Local Authentication</td>
<td>Pete Massiello</td>
</tr>
<tr>
<td></td>
<td>itechsol</td>
<td>hmcsuperadmin</td>
<td>AllSystemResources</td>
<td>Local Authentication</td>
<td>new user from Wizard</td>
</tr>
<tr>
<td></td>
<td>hscppe</td>
<td>hmcpe</td>
<td>AllSystemResources</td>
<td>Local Authentication</td>
<td>hscppe</td>
</tr>
<tr>
<td></td>
<td>iTech-oper</td>
<td>hmcoperator</td>
<td>AllSystemResources</td>
<td>Local Authentication</td>
<td>System Operator</td>
</tr>
<tr>
<td></td>
<td>root</td>
<td>hmcsuperadmin</td>
<td>AllSystemResources</td>
<td>Local Authentication</td>
<td>root</td>
</tr>
</tbody>
</table>
Identify “Desired” Resources

Detailed below are the physical I/O resources for the managed system. Select which adapters from the list you would like included in the profile and then add the adapters to the profile as Desired or Required. Click on an adapter to view more detailed adapter information.

<table>
<thead>
<tr>
<th>Select</th>
<th>Location Code</th>
<th>Description</th>
<th>Added</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-T9</td>
<td>RAID Controller</td>
<td>Required</td>
<td>512</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-T7</td>
<td>Universal Serial Bus UHC Spec</td>
<td>Required</td>
<td>513</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C19</td>
<td>RAID Controller</td>
<td>Required</td>
<td>514</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C4</td>
<td>PCI-E SAS Controller</td>
<td>Desired</td>
<td>516</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C5</td>
<td>Empty slot</td>
<td></td>
<td>517</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C6</td>
<td>Empty slot</td>
<td></td>
<td>518</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C7</td>
<td>Empty slot</td>
<td></td>
<td>519</td>
</tr>
</tbody>
</table>

Total: 7 Filtered: 7
Click on Adapter (WIH0062-P1-C4)
The 57B3 IOA is on the iTech71 partition

<table>
<thead>
<tr>
<th>Opt</th>
<th>Resource</th>
<th>Type-model</th>
<th>Status</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>CMB01</td>
<td>2BE1-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td></td>
<td>DC02</td>
<td>2BE1-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td></td>
<td>CMB05</td>
<td>268C-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td></td>
<td>DC02</td>
<td>6B02-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td></td>
<td>CMB07</td>
<td>2BD9-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td></td>
<td>DC04</td>
<td>2BD9-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td></td>
<td>CMB06</td>
<td>57B3-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td></td>
<td>DC03</td>
<td>57B3-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
</tbody>
</table>
Where we are moving also “Desired”

```
 Logical Partition Profile Properties: V6R1M1 @ iTech61 @ iTech-Power7 - iTech61

<table>
<thead>
<tr>
<th>General</th>
<th>Processors</th>
<th>Memory</th>
<th>I/O</th>
<th>Virtual Adapters</th>
<th>Power Controlling</th>
<th>Settings</th>
<th>Logical Host Ethernet Adapters (LHEA)</th>
<th>Tagged I/O</th>
<th>OptiConnect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Physical I/O**

Detailed below are the physical I/O resources for the managed system. Select which adapters from the list you would like included in the profile and then add the adapters to the profile as Desired or Required. Click on an adapter to view more detailed adapter information.

```

<table>
<thead>
<tr>
<th>Select</th>
<th>Location Code</th>
<th>Description</th>
<th>Added</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-T9</td>
<td>RAID Controller</td>
<td></td>
<td>512</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-T7</td>
<td>Universal Serial Bus UHC Spec</td>
<td></td>
<td>513</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C19</td>
<td>RAID Controller</td>
<td></td>
<td>514</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C4</td>
<td>PCI-E SAS Controller</td>
<td>Desired</td>
<td>516</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C5</td>
<td>Empty slot</td>
<td></td>
<td>517</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C6</td>
<td>Empty slot</td>
<td></td>
<td>518</td>
</tr>
<tr>
<td></td>
<td>U78AA.001.WIH0062-P1-C7</td>
<td>Empty slot</td>
<td></td>
<td>519</td>
</tr>
</tbody>
</table>
```

Total: 7  Filtered: 7
## Not currently on this system (iTech61)

### Work with Storage Resources

<table>
<thead>
<tr>
<th>Opt</th>
<th>Resource</th>
<th>Type-model</th>
<th>Status</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>CMB01</td>
<td>290A-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>-</td>
<td>DC01</td>
<td>290A-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>-</td>
<td>CMB02</td>
<td>268C-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>-</td>
<td>DC02</td>
<td>6B02-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>-</td>
<td>CMB06</td>
<td>57B3-001</td>
<td>Not detected</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>-</td>
<td>DC03</td>
<td>57B3-001</td>
<td>Not detected</td>
<td>Storage Controller</td>
</tr>
</tbody>
</table>

F3=Exit  F5=Refresh  F6=Print  F12=Cancel

---

**I902 - Session successfully started**
Command to move it (QShell)

QSH Command Entry

> chhwres -r io -m iTech-Power7 -o m -p iTech71 -t iTech61 -l 21010204

F3=Exit  F6=Print  F9=Retrieve  F12=Disconnect
F13=Clear  F17=Top  F18=Bottom  F21=CL command entry
### Work with Storage Resources

**Type options, press Enter.**
* 7=Display resource detail  9=Work with resource

<table>
<thead>
<tr>
<th>Opt</th>
<th>Resource</th>
<th>Type-model</th>
<th>Status</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>CMB01</td>
<td>290A-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>0</td>
<td>DC01</td>
<td>290A-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>0</td>
<td>CMB02</td>
<td>268C-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>0</td>
<td>DC02</td>
<td>6B02-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>0</td>
<td>CMB06</td>
<td>57B3-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
<tr>
<td>0</td>
<td>DC03</td>
<td>57B3-001</td>
<td>Operational</td>
<td>Storage Controller</td>
</tr>
</tbody>
</table>

**F3=Exit  F5=Refresh  F6=Print  F12=Cancel**

**I902 - Session successfully started**
Power On/Off

• You must Shutdown the hosted partition down (PWRDWNSYS) BEFORE the Hosting Partition.

• You must start the Hosting Partition FIRST.
Agenda

• Introduction
• Create Virtual SCSI Server on Hosting Partition
• Create NEW IBM i Client Partition (Hosted / Guest)
• Create Network Server & Storage on Hosting Partition.
• Start the partition from the HMC
• Add additional Disks
• Other devices to configure/manage
• Summary
7 Key Points to take Home

• Plan your disk requirements, and other Resources (Memory, Processors, Ethernet, Tape, DVD).
• Make sure you are on the latest cumulative PTFs & FSP Firmware.
• Need SAVSYS or I_BASE_01 to load LIC.
• Make sure you understand sharing of CPU, DVD, and Tape.
• Analyze disk utilization before you start.
• Each Host Ethernet Adapter port is a switch sharable among partitions.
• Your resource name of the NWSD must match the Virtual Server SCSI device.

**Note:** While this was a step by step approach for you to follow, your screens might be a little different based upon your hardware and resources of your machine, but the concepts don’t change.
Your Turn!

Questions?

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Twitter: PeteM59