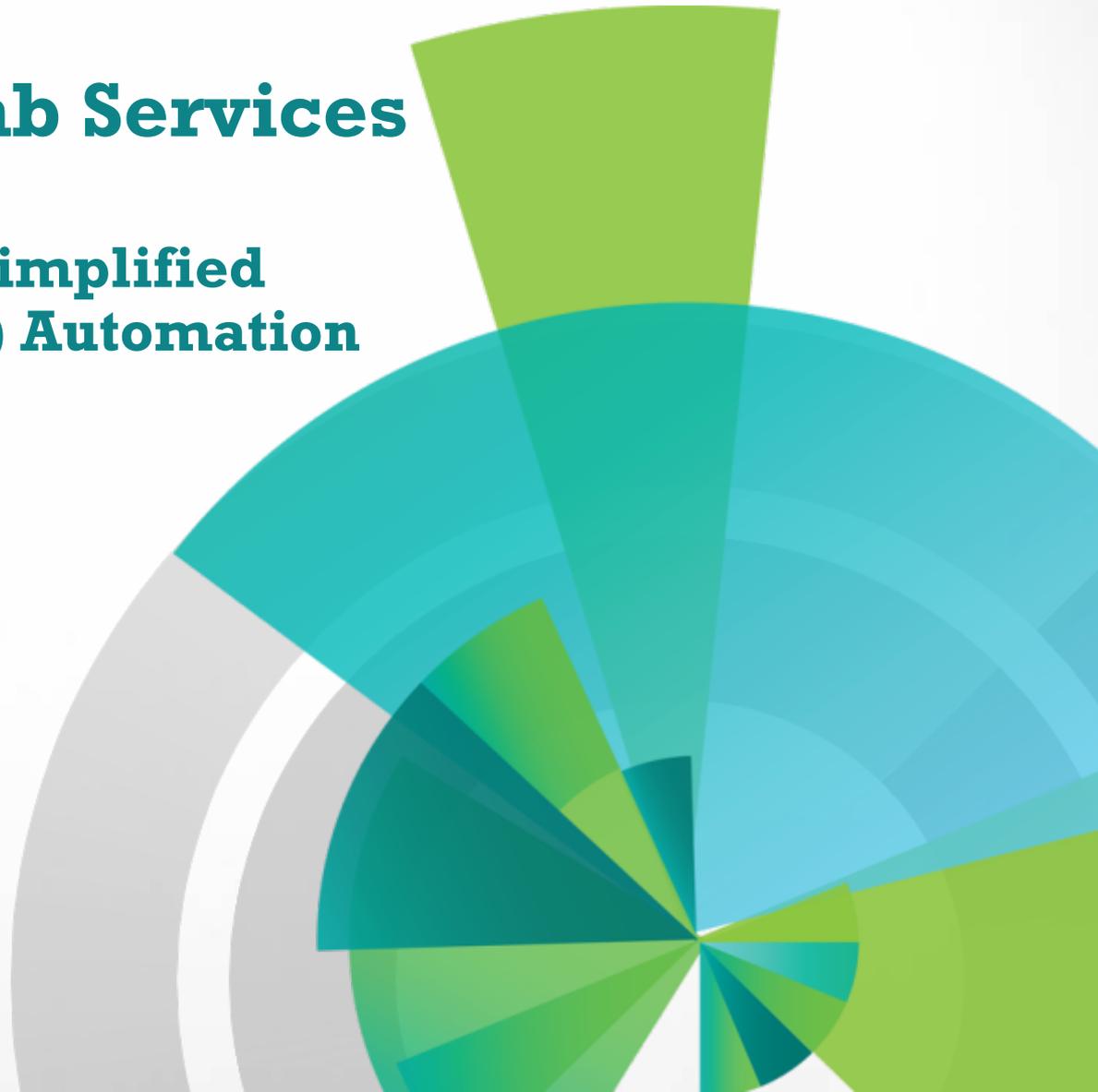


IBM Systems Lab Services

PowerVM LPM and Simplified Remote Restart (SRR) Automation Tool

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- This tool was released in 4Q2014. Over 160 customers worldwide have already adopted it. There is very high customer satisfaction with this tool.
- This tool is the fastest growing ever in lab-services and is used on every continent and sub-continent (other than Antarctica).
- With the new SRR feature of Power8 servers, this tool is becoming a must for any customer wanting to use SRR.
- Customers current use of LPM
 - Customers are using LPM more and more as part of their daily tasks (workload balancing) and planned maintenance procedures
 - The HMC GUI only allows a single partition to be selected at a time
 - Some customers are writing scripts to move many partitions at a time
 - Imagine having to move 100 partitions from a server (esp using the GUI -(that's a lot of clicks!))

- Automated use of LPM
 - This tool was developed to allow a customer to quickly move one or many partitions from a server using LPM to other servers (as few as 4 clicks)
 - It can also return the partitions back to the original server with the original mappings (HBA/virtual slot id) (again, as few as 4 clicks)
 - You can build a plan(s) in advance and execute the plans during maintenance windows
 - You can schedule LPM operations
- Automated use of Simplified Remote Restart (SRR)
 - Use of SRR on the HMC is only thru command line (CLI). There is no GUI for the SRR function and you can only move 1 partition at a time via the HMC CLI.
 - The tool works similar to both LPM and SRR, you can use a GUI to quickly SRR many or all of the partitions to one or more destination servers.
 - You can build a plan(s) in advance and execute the plans during an outage.
 - A huge benefit of the tool is that once the server is repaired, the tool can move all the partitions back to the original server with just a few clicks using LPM.

- The tool version numbering is changed to match the features of the highest HMC version it can exploit.
- For example, HMC V8.5 can specify vfc mappings and shared proc pools when doing SRR. V8.5 of the tool supports those features.
- The tool still supports older HMC levels.
- New features are –
 - Specifying new Vswitch mapping during LPM
 - Specifying sr-iov vnic mappings during LPM
 - Increasing number of vfc mapping support from 63 to unlimited
 - Subdividing partitions into different groups of concurrent LPMs
 - Specifying concurrency performance levels on a per partition basis
 - Returning SRR partitions back to original server with original settings
 - Remote HMC support for SRR
 - Use of ssh keys instead of HMC passwords
 - Enabling SRR during LPM operations

Home Screen – V8.5 release



Admin PowerVM LPM Automation Tool Style: Redmond About

Information Statistics

Count: 2

Count: 7

Count: 72

Count: 39

- HMC and Server Management**
Add/delete/view HMC/Server/LPAR which will be managed by this tool. You must add at least one HMC
- LPM Away**
Choose the LPARs or Server to be moved by LPM.
- LPM Return**
Choose the Server you want to return LPARs to.
- Configure**
Show/Change the configure information of this tool
- Schedule**
See the schedule plan
- Remote Restart**
Validate or Perform Remote Re
- DPO**
Perform DPO
- LPM History**
View the history of the LPM operations that have been performed.

This icon gets you to this screen

LPM Away – Choose servers



The screenshot displays the PowerVM LPM Automation Tool interface. At the top, there is a navigation bar with the text "Welcome Admin" and "PowerVM LPM Automation Tool". Below this, a progress bar shows the current task: "Current Task: Choose Partitions >>>> LPM Validate >>>> LPM Away".

The main content area is split into two panels. The left panel, titled "Please choose the partitions to be moved.", shows a tree view of servers under "Pok HMC". The "thoradfp1" partition is selected, indicated by a red circle. A text box next to it states: "One click will select all the partitions or select/deselect individual partitions".

The right panel, titled "Please choose the Destination Servers you want to move to.", shows the same tree view. The "jupe4bfp1" and "jupe4dfp1" partitions are selected, indicated by red circles. A text box next to it states: "Can choose one or many destination servers".

Below the panels, there are two notices: "Notice: You can choose a entire Server or a set of LPARs within a Server." and "Notice: The source Server and the destination Server can not be the same." At the bottom right, there are three buttons: "Import", "Cancel", and "Next".

At the bottom of the interface, there is a toolbar with several icons. A red circle highlights a blue arrow icon pointing up and to the right. Below the toolbar, the URL "http://localhost:8080/lpm/jsp/lpm/rightTreeForchoose.jsp#" is visible.

This icon gets you to this screen

LPM Away – Validate Complete



PowerVM LPM Automation Tool

Style: Redmond About Exit

>>>> Choose Partitions >>>> Current Task: LPM Validate >>>> LPM Away

LPM Validation Results

View | Reload Page 1 of 1 100 View 1 - 32 of 32

	LPAR Name	Source Server	Dest Server	Validation State	Last Time	Detail
1	lpmclient10	thoradfp1	jupe4dfp1	Success	11 seconds	
2	lpmclient10	thoradfp1	jupe4bfp1	Success	8 seconds	Details Warnings
3	lpmclient11	thoradfp1	jupe4dfp1	Success	19 seconds	
4	lpmclient11	thoradfp1	jupe4bfp1	Success	18 seconds	Details Warnings
5	lpmclient12	thoradfp1	jupe4dfp1	Success	14 seconds	
6	lpmclient12	thoradfp1	jupe4bfp1	Success	20 seconds	Details Warnings
7	lpmclient13	thoradfp1	jupe4dfp1	Success	10 seconds	Warnings
8	lpmclient13	thoradfp1	jupe4bfp1	Success	17 seconds	Details Warnings
9	lpmclient14	thoradfp1	jupe4dfp1	Success	18 seconds	
10	lpmclient14	thoradfp1	jupe4bfp1	Success	15 seconds	Details Warnings
11	lpmclient15	thoradfp1	jupe4dfp1	Success	14 seconds	
12	lpmclient15	thoradfp1	jupe4bfp1	Success	15 seconds	Details Warnings

View | Reload Page 1 of 1 100 View 1 - 32 of 32

After errors are resolved, click

Validate

Revalidate Errors only

Export

Save results to XLS

After validate is successful, click

Cancel Next

Notice how each partition was validated to both possible destination servers.

LPM Away – Placement Panel



Welcome Admin IBM Power Systems LPM Evacuation Tool Style: Redmond About Exit

>>>> Choose Partitions >>>> LPM Validate >>>> **Current Task: LPM Away** >>>> Perform DPO

Partition Placement

Page 1 of 2 View 1 - 15 of 18

LPAR Name	CPU	Mem	Dest Server	Options
1 lpmclient18	0.25	4096	jupe4dfp1	Choose Options
2 lpmclient5	0.5	4352	jupe4bfp1	Choose Options
3 lpmclient14	0.5	3328	jupe4bfp1	Choose Options
4 lpmclient4	1.25	3072	jupe4bfp1	Choose Options
5 lpmclient17	0.3	4352	jupe4dfp1	Choose Options
6 lpmclient13	0.3	3328	jupe4bfp1	Choose Options
7 lpmclient16	0.2	3328	jupe4dfp1	Choose Options
8 lpmclient2	0.2	4352	jupe4dfp1	Choose Options
9 lpmclient8	0.3	3328	jupe4dfp1	Choose Options
10 lpmclient19	0.5	3328	jupe4bfp1	Choose Options
11 lpmclient15	1	4352	jupe4bfp1	Choose Options
12 lpmclient3	0.3	3328	jupe4bfp1	Choose Options
13 lpmclient6	0.5	3328	jupe4bfp1	Choose Options
14 lpmclient20	0.25	4352	jupe4dfp1	Choose Options
15 lpmclient9	0.25	4352	jupe4dfp1	Choose Options

Partition Placement

Page 1 of 1 View 1 - 2 of 2

Dest Server	Remaining CPU	Remaining MEM
1 jupe4bfp1	0.15	1536
2 jupe4dfp1	0.95	12032

As dest server is changed, the Remaining values change

Placement Policy

Packing Order

Place partitions on a single Server until it is fully utilized then move on to the next Server

Striping
Place partitions evenly across all Servers

Concurrent Count

4

Some LPARs may be queued until the other LPARs finish.

Keep Mapping

Virtual Slots and HBA mappings will be maintained
 Keep Proc Pool Mapping

After placement is done, click

Save or restore an LPM plan, click

Change dest server

LPM Away – MSP and Shared Proc Pool



>>>>Choose Partitions >>>> LPM Validate >>>>Current Task: LPM Away

LPAR Name	CPU	Mem	Dest Server	Options
lpmclient2	0.0	0	jupe4dfp1	Choose Optio
lpmclient20	0.25	4352	jupe4dfp1	Choose Optio
lpmclient3	0.3	4096	jupe4dfp1	Choose Optio
lpmclient4	0.35	3072	jupe4dfp1	Choose Optio
lpmclient5	0.5	4352	jupe4dfp1	Choose Optio
lpmclient6	0.35	3328	jupe4dfp1	Choose Optio
lpmclient9	0.25	4352	None	Choose Optio

Config MSP Pair

MSP Config ProcPool Config

LPAR: lpmclient20
Server: jupe4dfp1
Source VIOS: any
Source VIOS IP:
Target VIOS: any
Target VIOS IP:
Apply **Apply To All** **Close**

APPLY will only change this one partitions LPM settings (MSP Config and ProcPool Config)

APPLY TO ALL will use these value for all partitions MSP Configs going to the same Dest Server (MSP Config)

LPM Away – Vswitch support in V8.5



Config MSP Pair ✕

MSP Config ProcPool Config **Vswitch Config**

LPAR: bf_client1
Server: bobfP8
Source Vswitch: ETHERNET0
Target Vswitch: ETHERNET0(D

ETHERNET0(Default)
testnet

Apply Apply To All

Close

APPLY will only change this one partition's Vswitch

APPLY TO ALL will use this value for all partitions

LPM Away – ConcurrPerf Level in V8.5



LPAR Name	CPU	Mem	Dest Server	ConLe	Options	
1	bf_client1	0.5	16384	bobfP8	4	Choose Option
2	bf_client2	1.2	24576	bobfP8	4	Choose Option

Dest Server	Remaining CF	Remaining ME	
1	bobfP8	0.7	2560

Placement Policy

Packing Order

Place partitions on a single Server until it is fully utilized then move on to the next Server

Striping

Place partitions evenly across all Servers

Concurrent Count

8

Some LPARs may be queued until the other LPARs finish.

Options

Virtual Slots and HBA mappings will be maintained

Keep Proc Pool Mapping

No LPM Return

After placement is done, click

Save or restore an LPM plan, click

In HMC V8.5.5., the number of threads per LPM can be set via the concurrency performance level parameter. 4 is default (1 thread per partition). If you need to move a large partition over a >30 Gbit network, you can set this to 1 and then 4 threads in a VIOS will be used to transfer data for that 1 partiition



Ability to change partition LPM order



Browser address bar: <https://9.114.253.196:8443/lpm/asset.action?type=main>

Search: rapollos pizza

Welcome Admin PowerVM LPM Automation Tool Style: Redmond About Exit

>>>> Choose Partitions >>>> LPM V

Partition Placement

LPAR Name	CPU	Mem
lpmclient2	0.0	0
lpmclient20	0.25	4352
lpmclient3	0.3	4096
lpmclient4	0.35	3072
lpmclient5	0.5	4352
lpmclient6	0.35	3328
lpmclient9	0.25	4352

Config LPM Order

Please drag the LPAR to set priority

- 1 lpmclient5
- 2 lpmclient6
- 3 lpmclient4
- 4 lpmclient3
- 5 lpmclient20
- 6 lpmclient2

Buttons: Confirm, Cancel

Placement Policy

Packing Order

Place partitions on a single Server until it is fully utilized then move on to the next Server

Striping

Place partitions evenly across all Servers

Concurrent Count: 8

Options

Virtual Slots and HBA mappings will be maintained

Keep Proc Pool Mapping

No LPM Return

After placement is done, click

Order Cancel Start LPM

Save or restore an LPM plan, click

Export Schedule

Click and drag a partition name up or down. 1 goes first, then 2, etc

- This new feature in V4 allows a customer to move the LPARs one way and not have the LPAR show up on the LPM Return Panel.
- This is useful if you are migrating LPARs from a P7 server to a P8 server and don't ever plan on returning the LPAR back to the P7 as the P7 will be decommissioned.
- This is also useful for customers who are just doing Workload Balancing and won't move it back later (or if they do, it will be part of another workload balancing operation).
- When you click this box, the LPAR will be moved but its source server and all its original mappings will not be saved in the tool's database for a later Return.
- If you are uncertain if an LPAR will be returned, don't check this box. Then if you decide to not return it, you can Delete if from the tool's database by clicking Delete on the LPM Return screen (more on that later).

- This new feature in V4 allows a customer schedule the LPM operation for a later time.
- You manage Schedule Operations on another panel (more on that later)

Schedule Perform LPM

Date: 01/27/2016 18:16

January 2016

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Time 18:16

Hour

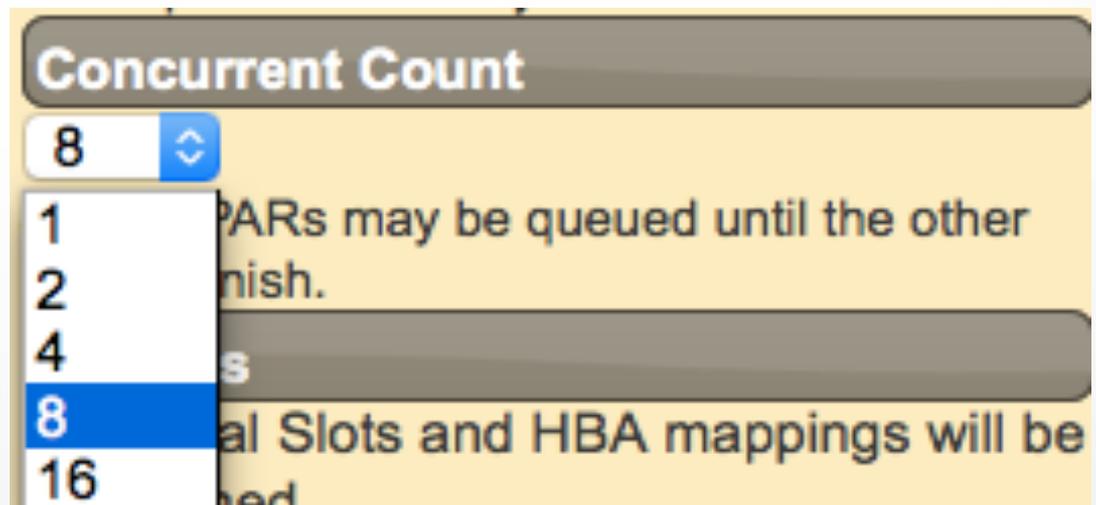
Minute

Confirm Close

Now Done

LPM Away process – deciding concurrency

- The tool will intermix LPMs to different servers depending on the LPM order and concurrency. Generally 8 or less LPMs at a time is recommended. More than 8 requires more planning.
- To do more than 8 at a time, you'll want to export the plan and then set up the MSP pairings to use 2 VIOS on both the source and destination servers and change the order of the LPMs.
 - Then when you import the changed plan, change the Concurrent Count on the Placement Panel



- So the tool supports different concurrency performance levels and the number of concurrent migrations to be performed.
- In Version 8.5 of the tool, there is a new option to subdivide partitions into different groups so that all the partitions in 1 group will be moved before the tool starts moving partitions in the next group.
- This feature is supported via the spreadsheet/plans option. There is a new column called “GROUP ID” which uses integers for group ids.
- A customer may want to move 3 partitions first and not start others till after those 3 complete. So even though the concurrent migrations count is set to 8 (default value), only 3 partitions will be moved concurrently in that group. If another group has 20 partitions in it, and the concurrency count is 8, the tool will start 8 LPM operations and then as 1 completes, another will be started to keep 8 going at one time.

- With this new feature, you can pre-plan a complex migration as follows.
- Let's say you have a 40 Gbit Link Aggregation between your MSPs.
- You can move your app servers in one group and use the default concurrency performance level and the partitions will be transferred up to your concurrent migrations count (default of 8).
- Then when you want to move the DB server which has a much larger memory footprint and you want it to move as quickly as possible, you put it into its own Group ID, and set the concurrent performance level to 1 (4 threads in a VIOS will be used to move the memory footprint as quickly as possible).
- The VIOS/MSP is capable of transferring data at near line speeds in this case.....40 Gbits/second. So a 500 Gbyte partition can be moved in less than 2 minutes.

LPM Away – migration in progress



Browser: http://localhost:8080/lpm/asset.action?type=main | PowerVM LPM Automation...

Administer your installati... IBM TCC Presents TRIPS Talent@IBM WWERS ACBL - Teaching Materials BOSS - Login IBM forums traveler

Welcome Admin | PowerVM LPM Automation Tool | Style: Redmond | About | Exit

>>>> Choose Partitions >>>> LPM Validate >>>> Current Task: LPM Away

Perform LPM

Page 1 of 1 | 15 | View 1 - 14 of 14

Stop	View	Reload	LPAR Name	Mem	Source Server	LPAR ID	Dest Server	Remote LPAR	LPM State	Last Time	Time Remainin	Percent	Action	Detail
			1 lpmclient17	4352	thoradfp1	22	jupe4dfp1	22	running	95 seconds	59 seconds	75%	Stop	
			2 lpmclient19	3328	thoradfp1	20	jupe4bfp1	20	running	95 seconds	22153 seconds	1%	Stop	
			3 lpmclient4	3072	thoradfp1	18	jupe4bfp1	18	running	95 seconds	194 seconds	28%	Stop	
			4 lpmclient11	4352	thoradfp1	8	jupe4dfp1	8	running	95 seconds	45 seconds	80%	Stop	
			5 lpmclient8	3328	thoradfp1	19	jupe4bfp1	19	running	95 seconds	81 seconds	46%	Stop	
			6 lpmclient15	4352	thoradfp1	17	jupe4bfp1	17	running	95 seconds		0%	Stop	
			7 lpmclient10	4352	thoradfp1	12	jupe4bfp1	12	running	95 seconds	328 seconds	21%	Stop	
			8 lpmclient14	3328	thoradfp1	16	jupe4bfp1	16	running	95 seconds	728 seconds	11%	Stop	
			9 lpmclient18	4096	thoradfp1	24	jupe4dfp1		waiting...				Stop	
			10 lpmclient16	3328	thoradfp1	26	jupe4dfp1		waiting...				Stop	
			11 lpmclient20	4352	thoradfp1	23	jupe4dfp1		waiting...				Stop	
			12 lpmclient12	3328	thoradfp1	6	jupe4dfp1		waiting...				Stop	
			13 lpmclient2	4352	thoradfp1	5	jupe4dfp1		waiting...				Stop	

Page 1 of 1 | 15 | View 1 - 14 of 14

Home | PowerVM LPM Automation Tool | Settings | Help | RSS

LPM Return – return partitions to original server



>>>> Current Task: Choose Partitions >>>> LPM Validate >>>> LPM Return

Please choose the Server to return LPARs to

- Pok HMC
 - thoradfp1

This screen will show servers with partitions that haven't been returned to their source server. If the partitions were moved to multiple servers, this operation will bring them back from all the servers.

If multiple plans were used to move partitions off of this server, you have 2 options. Let the tool bring all the partitions back at once or you can import the plans one by one to restore the server.

Notice: Please choose one Server each time.

Import Cancel Next

When moving the partitions back to the original managed system, the tool will restore the virtual adapter numbers and shared proc pools and HBA mappings that were originally being used before the managed system was evacuated

LPM Return – choose partitions



>>>> Current Task: Choose Partitions >>>> LPM Validate >>>> LPM Return

LPM Validation Results

Page 1 of 1 30 View 1 - 1 of 1

		LPAR Name	Source Server	Dest Server	Migrate Time	State	CPU	MEM
1	<input checked="" type="checkbox"/>	lpmclient3	jupe4dfp1	thoradfp1	2016-01-28 07:24:25	Running	0.3	4096

Page 1 of 1 30 View 1 - 1 of 1

Next Step

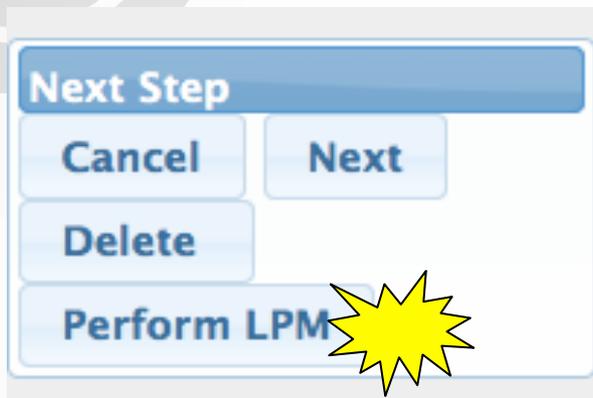
Cancel Next

Delete

Perform LPM



You don't have to return all partitions at once. Default is ALL partitions. Just check the LPARs that you want to do an Action on.



Cancel Button – leave this screen and go back to HOME screen

Next Button – for the LPARs you selected, go to Validation screen and then go to Placement Screen

Delete Button – for the LPARs you selected, Delete these LPARs source server and mappings and all remnants from the tools database (you don't want to return this LPAR to the source server)

Perform LPM – for the LPARs you selected, skip the Validation step and the Placement panel and just start the LPM. **This is a huge timesaver if you are returning lots of LPARs and a validation will be done as part of the LPM anyways.**

LPM Return Validate Panel



PowerVM LPM Automation Tool

Welcome Admin | Style: Redmond | About | Exit

>>>> Choose Partitions >>>> **Current Task: LPM Validate** >>>> LPM Return

LPM Validation Results

View | Reload | Page 1 of 1 | 15 | View 1 - 14 of 14

	LPAR Name	Source Server	Dest Server	Validation State	Last Time	Detail
1	lpmclient14	jupe4bfp1	thoradfp1	Success	17 seconds	Details
2	lpmclient10	jupe4bfp1	thoradfp1	Success	12 seconds	Details
3	lpmclient11	jupe4dfp1	thoradfp1	Success	18 seconds	
4	lpmclient19	jupe4bfp1	thoradfp1	Success	19 seconds	Details
5	lpmclient13	jupe4bfp1	thoradfp1	Success	13 seconds	Details
6	lpmclient15	jupe4bfp1	thoradfp1	Success	16 seconds	Details
7	lpmclient12	jupe4dfp1	thoradfp1	Success	9 seconds	
8	lpmclient18	jupe4dfp1	thoradfp1	Success	17 seconds	
9	lpmclient4	jupe4bfp1	thoradfp1	Success	15 seconds	Details
10	lpmclient20	jupe4dfp1	thoradfp1	Success	18 seconds	
11	lpmclient2	jupe4dfp1	thoradfp1	Success	11 seconds	
12	lpmclient17	jupe4dfp1	thoradfp1	Success	18 seconds	

View | Reload | Page 1 of 1 | 15 | View 1 - 14 of 14

After errors are resolved, click

Validate

Revalidate Errors only

Export

Save results to XLS

After Validate is successful, click

Cancel **Next**

LPM Return – Options screen



Browser address bar: <https://9.114.253.196:8443/lpm/asset.action?type=main> rapollos pizza

Navigation: >>>> Choose Partitions >>>> LPM Validate >>>> **Current Task: LPM Return**

Partition Placement

Page 1 of 1 15 View 1 - 1 of 1

LPAR Name	CPU	Mem	Dest Server	Options
lpmclient3	0.3	4096	thoradfp1	Choose Options

Partition Placement

Page 1 of 1 15 View 1 - 1 of 1

Dest Server	Remaining CPU	Remaining MEM
thoradfp1	4.80	265472

Concurrent Count

8

Some LPARs may be queued until the other LPARs finish.

After placement is done, click

Order Cancel Start LPM

Save or restore an LPM plan, click

Export Schedule

Bottom navigation: Home, Server, Navigation, Settings, Refresh, Folder, RSS, Mail

A subset of the options on the LPM Away screen as those options aren't applicable to LPM Return (i.e. Packing/Striping...there's only 1 source server).

- The tool is designed so that a customer can create plans, **MODIFY** them outside of the tool, and import those changed plans into the tool.
- The plan is an Excel spreadsheet where many of the fields can be modified and imported back into the tool.
- The plan includes both the LPM Away functionality and the LPM Return functionality on a different worksheet.
- You can import plans on either the LPM Away GUI or the LPM Return GUI. It will read the appropriate worksheet (“LPM Away” or “LPM Return”) and load that into the tool.



- Designing GUIs for the many advanced features of LPM and SRR would be challenging so the tool uses plans to expose these advanced features to customers.
- While many customers are happy with just the GUI panels, some customers need a lot of control when performing LPM and SRR.
- The spreadsheet is a superset of the GUI capabilities.
- Anything on the GUI can be changed in the spreadsheet.
- Items that are not on the GUI but can be modified in plans are –
 - Vfc mappings (both LPM and SRR)
 - Vscsi mappings (only LPM)
 - SR-IOV VNIC mappings (only LPM)
 - Group IDs (only LPM)

- The customer can build stages of plans. For example, they want to do some moves on Monday (one set of application LPARs) and then Tuesday (another set of application LPARs), etc. They build a plan for each day and can import those plans the following week.
- Since each plan can stand on its own, you can execute them in any order.
- You can make many changes in the plan with Excel and then import those changes back into the tool.
- The HMC Command Line (CL) that is executed for each LPM operation is shown in the plan.
 - This can be useful if someone wants to extract the HMC CL and build their own scripts.
 - It can also be used to perform the moves in the unlikely event the tool fails. The customer can save the plan. Then if there is a problem, can manually execute those commands on the HMC console.
- When you import a plan, the LPM validation is done with the specific parameters/values you specified in the plan (i.e. slot numbers, msps, etc) **and if you have an incorrect value, the validation fails.**

For those advanced virtual adapter customers

- The spreadsheet now supports unlimited virtual fibre channel adapters and vscsi adapters in V8.5. It used to support 63 VFC adapters in the spreadsheet
- The tool also now will move and return virtual fibre channel adapters that are mapped to a vfchost but do not have a FCS port specified. This case has come up with a couple of customers that will dynamically map virtual tapes to vfchosts.

LPM Away Excel worksheet



Yellow Columns can be changed and be imported into tool

apply_all.xls [Compatibility Mode] - Excel

HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW

fx

CLIENT NAME	SOURCE SERVER	DEST SERVER	DEST LPAR ID	SOURCE MSP VIOS	SOURCE MSP IP	DEST MSP VIOS	DEST MSP IP
volkit_client1	thoradfp1	None					
client22	thoradfp1	None					
client4	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client15	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client10	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client5	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client14	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client19	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client1	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client11	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client17	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184
client8	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client13	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client3	thoradfp1	jupe4bfp1		oregonp01	9.114.252.212	vios1	9.114.253.162
client20	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184
client7	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184
client9	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184
client18	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184
client12	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184
client2	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184
client16	thoradfp1	jupe4dfp1		oregonp02	9.114.252.213	jigp02	9.114.253.184

LPM Away command syntax



Microsoft Excel - lpmMatch.xls

Type a question for help

M1 fx COMMAND

	L	M
	HMC NAME	COMMAND
1		
2	POK HMC	migr!par -o m -m 'thoradfp1' -t 'jupe4bfp1' -p 'lpmclient4' -i \\'\"'shared_proc_pool_name=DefaultPool'\"', \\'\"'virtual_fc_mappings=21/oregonp02/2/9/fcs0,22/oregonp02/2/83/fcs1,11/oregonp01/
3	POK HMC	migr!par -o m -m 'thoradfp1' -t 'jupe4bfp1' -p 'lpmclient15' -i \\'\"'virtual_fc_mappings=21/oregonp02/2/25/fcs0,22/oregonp02/2/26/fcs1,11/oregonp01/1/38/fcs0,12/oregonp01/1/39/fcs1'\"'
4	POK HMC	migr!par -o m -m 'thoradfp1' -t 'jupe4bfp1' -p 'lpmclient5' -i \\'\"'shared_proc_pool_name=DefaultPool'\"', \\'\"'virtual_fc_mappings=21/oregonp02/2/19/fcs0,22/oregonp02/2/20/fcs1,11/oregonp01/
5	POK HMC	migr!par -o m -m 'thoradfp1' -t 'jupe4bfp1' -p 'lpmclient6' -i \\'\"'shared_proc_pool_name=DefaultPool'\"', \\'\"'virtual_fc_mappings=21/oregonp02/2/31/fcs0,22/oregonp02/2/32/fcs1,11/oregonp01/
6	POK HMC	migr!par -o m -m 'thoradfp1' -t 'jupe4bfp1' -p 'lpmclient19' -i \\'\"'shared_proc_pool_name=DefaultPool'\"', \\'\"'virtual_fc_mappings=21/oregonp02/2/46/fcs0,22/oregonp02/2/47/fcs1,11/oregonp01/
7	POK HMC	migr!par -o m -m 'thoradfp1' -t 'jupe4bfp1' -p 'lpmclient14' -i \\'\"'shared_proc_pool_name=DefaultPool'\"', \\'\"'virtual_fc_mappings=21/oregonp02/2/4/fcs0,22/oregonp02/2/93/fcs1,11/oregonp01/

Ready NUM

LPM Return Excel worksheet



Microsoft Excel - lpmMatch.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

These columns can be changed

11 DEST PROC POOL

	A	B	C	D	E	F	G	H	I	J	K
1	LPAR NAME	SOURCE SERVER	DEST SERVER	SOURCE MSP VIOS	SOURCE MSP IP	DEST MSP VIOS	DEST MSP IP	SOURCE PROC POOL	DEST PROC POOL	SOURCE LPAR ID	HMC IP
2	lpmclient4	jupe4bfp1	thoradfp1					DefaultPool	DefaultPool	6	hmcmaster1.pok.stglabs.
3	lpmclient15	jupe4bfp1	thoradfp1							17	hmcmaster1.pok.stglabs.
4	lpmclient5	jupe4bfp1	thoradfp1					DefaultPool	DefaultPool	7	hmcmaster1.pok.stglabs.
5	lpmclient6	jupe4bfp1	thoradfp1					DefaultPool	DefaultPool	8	hmcmaster1.pok.stglabs.
6	lpmclient19	jupe4bfp1	thoradfp1					DefaultPool	DefaultPool	20	hmcmaster1.pok.stglabs.
7	lpmclient14	jupe4bfp1	thoradfp1					DefaultPool	DefaultPool	16	hmcmaster1.pok.stglabs.
8	lpmclient11	jupe4dfp1	thoradfp1					DefaultPool	DefaultPool	13	hmcmaster1.pok.stglabs.
9	lpmclient17	jupe4bfp1	thoradfp1					DefaultPool	DefaultPool	23	hmcmaster1.pok.stglabs.

LPM Away LPM Return

Ready

LPM Return command syntax



The screenshot shows a Microsoft Excel spreadsheet with the following data:

	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	HMC NAME	COMMAND																
2	POK HMC	migrpar -o m -m 'jupe4bfp1' -t 'thoradfp1' -p 'lpmclient4' -i \"																
3	POK HMC	migrpar -o m -m 'jupe4bfp1' -t 'thoradfp1' -p 'lpmclient15' -i \"																
4	POK HMC	migrpar -o m -m 'jupe4bfp1' -t 'thoradfp1' -p 'lpmclient5' -i \"																
5	POK HMC	migrpar -o m -m 'jupe4bfp1' -t 'thoradfp1' -p 'lpmclient6' -i \"																
6	POK HMC	migrpar -o m -m 'jupe4bfp1' -t 'thoradfp1' -p 'lpmclient19' -i \"																
7	POK HMC	migrpar -o m -m 'jupe4bfp1' -t 'thoradfp1' -p 'lpmclient14' -i \"																
8	POK HMC	migrpar -o m -m 'jupe4dfp1' -t 'thoradfp1' -p 'lpmclient11' -i \"																
9	POK HMC	migrpar -o m -m 'jupe4dfp1' -t 'thoradfp1' -p 'lpmclient17' -i \"																

The spreadsheet also shows a navigation pane at the bottom with tabs for 'LPM Away' and 'LPM Return', and a status bar indicating 'Ready'.

SR-IOV VNIC for LPM Away/Return – V8.5

You can specify the one or all of the values for a VNIC adapter

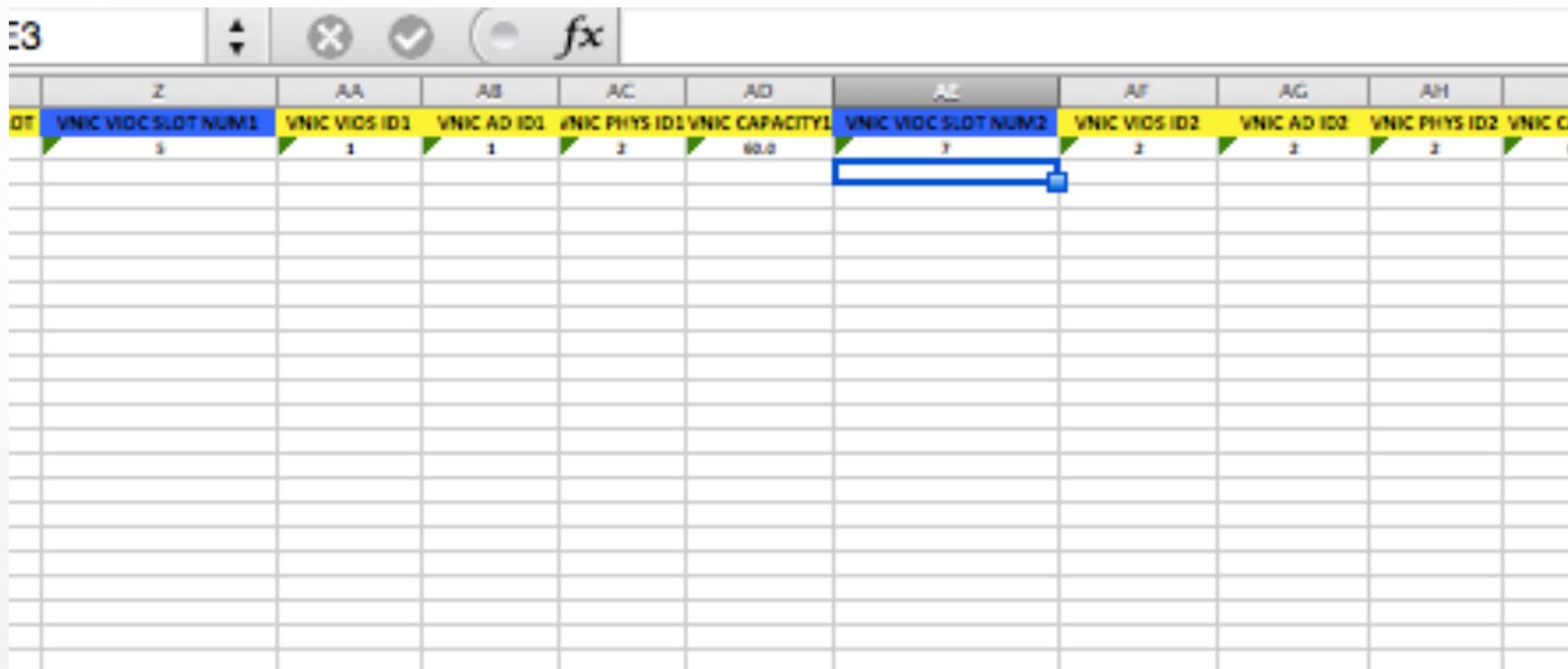
virtual-slot-number

vios-lpar-ID

sriov-adapter-ID

sriov-physical-port-ID

capacity



The screenshot shows a spreadsheet with columns labeled Z, AA, AB, AC, AD, AE, AF, AG, AH. The data rows are as follows:

Z	AA	AB	AC	AD	AE	AF	AG	AH	
VNIC VIDC SLOT NUM1	VNIC VIDC ID1	VNIC AD ID1	VNIC PHYS ID1	VNIC CAPACITY1	VNIC VIDC SLOT NUM2	VNIC VIDC ID2	VNIC AD ID2	VNIC PHYS ID2	VNIC CAPACITY2
3	1	1	2	60.0	7	2	2	2	60.0

What are Power Enterprise Pools

Mobile processor and memory activations may be re-allocated to any system within a defined pool

- Systems with different clock speeds can coexist in the same pool
- Activation assignment and resource movement is controlled by the HMC

POWER8 systems may interoperate in the same pool with POWER7 systems

- High-end pool for POWER7+ 780, Power 795 & Power E880 systems
- Midrange pool for POWER7+ 770 systems & Power E870

Activations can be moved within a pool at any time, without contacting IBM

- No limit to the number of times activations can be moved

Movement of activations is *instant, dynamic and non-disruptive*

- Ideal for workload balancing and optimizing application availability

The tool can do placement based on Power Enterprise Pools and move the mobile processor/memory as part of the LPM operations.

The best P8 feature you never knew you had

- Live Partition Mobility has made the Power platform stand out for its functionality to help customers to do planned maintenance and easy migrations and workload balancing
- But if you have an “unplanned outage” (IBM speak for your server crashed), you can get those partitions back up and running on another server
- No waiting for IBM to get the server back online, no waiting for IBM support to get back to you, just no waiting.
- You restart the workload on other servers and get your business back up and running in minutes!!!

- SRR is Simplified Remote Restart
- This PowerVM Enterprise Edition feature allows you to restart your LPM-capable LPARs on another server.
- You can restart it on a server in your data center, or if configured for cross-site LPM, you can restart it on a server in another data center with the first data center completely offline!
- **How hard is it to implement? Click a box on the HMC and its implemented.**

Unplanned outage with SRR phone call



- Unplanned outage using P8 Enterprise Edition - scenario 1
- Admin calls Boss...the conversation is as such
- Admin - Hello Boss....we just lost a P8 frame...it crashed and I've called IBM Support and they are on their way.
- Boss – Which applications are affected and how long does IBM think the server will be down?
- Admin – Well, I've already Remote Restarted our most critical partitions and now am restarting the lower priority partitions....shouldn't be long now.
- Boss - Remote Restarted - I thought we could only LPM when the server is up.
- Admin - Yep...This SRR is like LPM but for when the system is crashed
- Boss - okay.....once the IBM SSR fixes the server...call me and then we can start to move those running partitions back to the failed server
- Admin - No problem
- **This is how we would like an unplanned outage to go!**

- Admin - Hello Boss....we just lost a P8 frame...it crashed and I've called IBM Support and they are on their way.
 - Boss – Which applications are affected and how long does IBM think the server will be down?
 - Admin - Well that server hosted some web servers for or Social Media sites and our payment system and our new Samsung launch app developers and repair time is TBD.
 - Boss - OMG - we can't pay folks and our new cell phone launch is only 1 week away....we need this up fast as the developers are already behind
-
- Let's now go forward in time...next slide please

A few days later and its now the Post Crit Sit phone call with IBMers and customers including a VP in charge of IT.

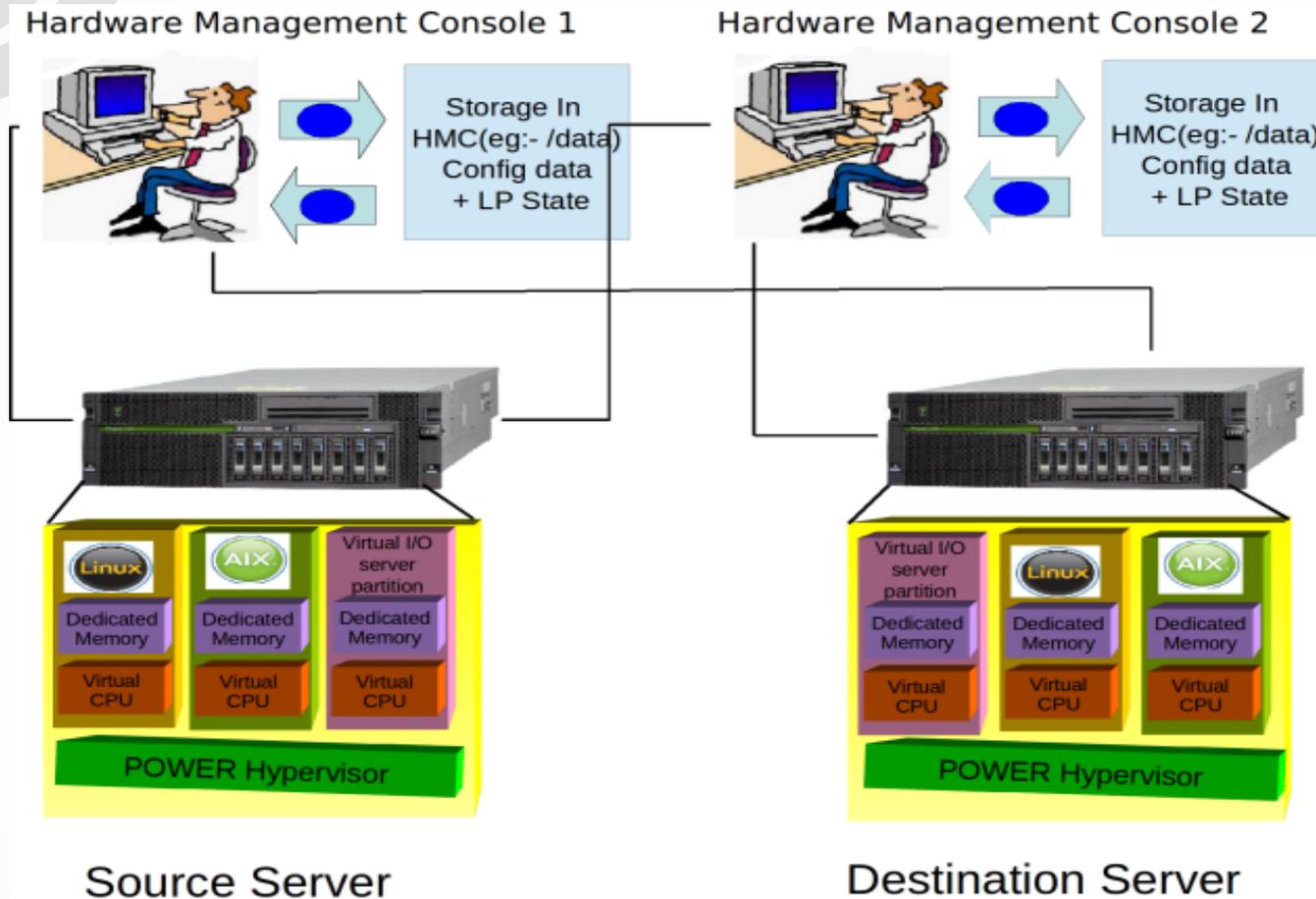
- IBM - We've done the analysis of the failure and understand its nature and it won't happen again.
- Customer VP - We need to have some way to mitigate this in the future.
- IBM - You could have enabled SRR and just moved those workloads to your other servers
- Customer VP - What do I need to get this SRR?
- IBM - You have had this capability on your boxes since day 1.
- Customer VP - Hummm...interesting....okay what do I need to do enable this?
- IBM - Shutdown all your partitions again and set this bit on each lpar and restart...
- Customer VP - I HAVE TO SHUTDOWN ALL MY WORKLOADS AGAIN THAT CRASHED EARLIER THIS WEEK TO DO THIS....
- The rest of the conversation is left to your imagination.

Why customers don't think they need SRR

- All my production LPARs are clustered so failover will work.
 - Yes, you should have clustered prod LPARs, but sometimes the failover doesn't work...
 - app developers have hard-coded ip addresses or other config information that is only exposed when a failure occurs
 - Failover hasn't been tested
- My non-prod workload can be down during an unplanned outage.
 - Many customers tell me their “non-prod is the new prod”
 - Many developers are working 24x5 WW on the non-prod lpars
 - Non-prod is rarely clustered in customer environments
- I don't have enough spare resources to SRR a failed server
 - You don't have to restart all the LPARs from a failed server
 - You can shutdown non-important LPARs on other servers and move the important LPARs from the failed server

- Remote Restart
 - High availability option for partitions to recover from a server outage
 - Preserves Partition's resource configuration, partition restarted with most recent configuration
 - Faster re-provisioning of partitions upon server outage
 - Prevents configuration loss & saves time & effort in re-creating the original configuration
 - Reduced downtime for workloads
- Simplified Remote Restart (SRR)
 - Introduced with HMC V8 R8.2.0, Firmware 820 & VIOS 2.2.3.4
 - Removes the requirement of reserved storage device for each partition.
 - Reduced complexity in setting up environment & usage

Simplified Remote Restart Configuration



- Configuration data of the partition

Note: Partition should use Virtual IO only

- SRR can be enabled the following ways
- At partition creation time
 - Classic GUI has checkbox on first panel of Create Partition Wizard (all HMC versions)
 - Enhanced GUI has partition templates with SRR enabled (HMC 8.8.5 version)
 - Enhanced GUI can capture SRR partition and create new template (HMC 8.8.5 version)
- When partition is powered off
 - Enhanced GUI has checkbox on Partition Properties (HMC 8.8.5 version)
 - Via HMC Command line (all HMC versions)
 - `chsyscfg -r lpar -m managed-system -i "name=partition name, simplified_remote_restart_capable=1"`
- During LPM operations – as partition is moved (between P7/P8 or P8/P8)
 - Via HMC Command line (HMC 8.8.5 version)
 - `migr1par --requireerr 2 -o m -m src_system -t dest_system`
- The tool will enable SRR during LPM by default. This is a user controlled feature.

All the different types of RR



The screenshot shows a web browser window titled "HV4 - Mozilla Firefox" with the URL "https://9.126.138.169/hmc/wcl/T238". The main content area is titled "HV4" and has several tabs: "General", "Processors", "Memory", "I/O", "Migration", "Power-On Parameters", "Capabilities", and "Advanced". The "Capabilities" tab is selected, displaying a table with two columns: "Capability" and "Value".

Capability	Value
Inactive Partition Mobility Capable	True
IBM i Partition Mobility Capable	True
Partition Processor Compatibility Mode Capable	True
Partition Availability Priority Capable	True
Electronic Error Reporting Capable	True
Active Partition Processor Sharing Capable	True
Firmware Power Saver Capable	True
Hardware Power Saver Capable	True
Virtual Switch Capable	True
Virtual Fibre Channel Capable	True
Active Memory Expansion Capable	True
Hardware-Accelerated Active Memory Expansion Capable	True
Partition Suspend Capable	True
Partition Remote Restart Capable	True
PowerVM Partition Remote Restart Capable	True
Virtual Trusted Platform Module Capable	True
SR-IOV Capable	True
Dynamic Platform Optimization Capable	True
Virtual Server Network Phase 2 Capable	True
PowerVM Partition Simplified Remote Restart Capable	True

At the bottom of the window are three buttons: "OK", "Cancel", and "Help".

Partition Remote Restart – deprecated so You may ignore this capability

PowerVM Partition Remote Restart – This is the complicated RR

This is SRR and its for P8 and this is the one you want to use

Simplified Remote Restart Enhancements

- Cross MC Remote Restart
 - Source & Target systems managed by different HMCs
- Remote Restart with no connection to system
 - Complete server outage with FSP also not available
- Live Partition Mobility Override
 - Migrating Simplified RR capable partitions between P7 & P8
- Manage Partition UI & Template
 - Templates for creating partition with Simplified RR capability
 - Manage Partition (Enhanced UI) to enable/disable Simplified RR capability
- Auto cleanup on source system after successful remote restart
- User Specifications/Overrides
 - Shared Processor Pool
 - Virtual FC Mappings

Create Lpar Wizard : HV4-216

→ Create Partition

- Partition Profile
- Processors
- Processing Settings
- Memory Settings
- I/O
- Virtual Adapters
- Logical Host Ethernet Adapters (LHEA)
- SNI Adapters
- HCA
- Optional Settings
- Profile Summary

Create Partition

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 : HV4-216

Partition ID :

Partition name :

Allow this partition to be suspended.

Allow this partition to be remote restartable(**Simplified**)

Allow this partition to be vTPM capable

Sync Current configuration Capability

< Back **Next >** Finish Cancel

This option is only shown on the Create Partition wizard. If you don't set it now, you will have to change shutdown the LPAR and change this value and then reboot the LPAR

Manage Partition Enhanced HMC GUI



- New options in Manage Partition UI (Enhanced+ Login)
 - SRR capability can be enabled/disabled when partition is not active
 - If system supports Simplified RR, only Simplified RR option is shown in the UI even if the partition is enabled with Remote Restart.
 - Remote Restart State is displayed
 - Option to refresh configuration data stored for SRR.

General Save Cancel

View and modify the client partition name and enable the advanced and virtualization capability for the partition. You can also specify advanced settings based on the operating system for the partition. [Learn More](#)

Advanced

OS Type / Environment:	AIX/Linux
OS Version:	Unknown
IP Address:	Unknown
Boot Mode:	Normal
Key Lock Position:	<input type="radio"/> Manual <input checked="" type="radio"/> Normal
Serial Number * System Machine Type:	8408-E8E*10677CV
Description:	<input type="text"/>
Group Tags:	

Virtualization Capabilities

Suspend / Resume

Simplified Remote Restart State Remote Restartable

Partition Templates – Enhanced HMC GUI

- Starter/Pre-defined partition template with Simplified Remote Restart Enabled
- Capture a partition enabled with Simplified RR as a template
- Deploy Partition with Simplified RR capability from templates
 - Enabled
 - Partition is deployed with SRR capability if system supports Simplified RR
 - Template Deploy fails if system doesn't support Simplified RR
 - Disable
 - Partition is deployed without SRR capability
 - Enable If Possible
 - Partition is deployed with SRR capability if system supports SRR.
 - Partition is deployed without SRR capability if system doesn't support SRR

Templates and OS Images



Use templates to configure the managed system or partitions that are connected to the managed system. You can also manage installation resources for the management console.

[What is a Template ?](#) →

- System
- Partition**
- OS and VIOS Images

Partition templates contain details about partition resources, such as physical adapters, virtual networks, and storage configuration. Click on the template name to see the details about the template. Select a partition template from the following list.

Import

Filter

Text to filter

Action ▾

	Template Name	Description	Partition Type	Processors	Network	Storage	Features
<input type="radio"/>	QuickStart_lpar_IBMi_3		IBM i	Dedicated	None	None	Simplified Remote Restart
<input type="radio"/>	QuickStart_lpar_rpa_1		AIX Or Linux	Dedicated	None	None	Suspend Resume
<input type="radio"/>	QuickStart_lpar_rpa_2	without Virtualization capabilities	AIX Or Linux	Dedicated	None	None	None
<input type="radio"/>	QuickStart_lpar_rpa_3		AIX Or Linux	Dedicated	None	None	Simplified Remote Restart

- Automatic cleanup of a remote restarted partition on source system
- Auto Cleanup is performed when
 - Source system state comes back to operating state
 - Partition remote restart status is “Remote Restarted”
 - RMC for the VIOS partitions serving the clients is active
- Auto Cleanup is done without force
- User can trigger the manual cleanup as well using the `rrstartlpar` command
- When PowerVC is used to orchestrate Remote Restart
 - Auto cleanup can be disabled
 - By default, auto cleanup is enabled
 - Setting is maintained across upgrades, but not on fresh install.
 - CLI :
 - `rrstartlpar -o set -r mc -i “auto_cleanup_enabled=0|1”`
 - `lsrrstartlpar -r mc`
`auto_cleanup_enabled=0|1`

LPM Automation tool also supports SRR



http://localhost:8080/lpm/asset.action?type=main PowerVM LPM Automation...

Welcome Admin PowerVM LPM Automation Tool Style: Redmond About Exit

>>>> Current Task: Choose Partitions >>>> Remote Restart Validate >>>> Remote Restart

Please choose the partitions to be moved.

- BladeCenter --Operating
- PS701_ncis04 --Power Off
- PS704_ncis01 --Operating
- Server-8231-E2D-SN107E1EP --Operating
- Server-9109-RMD-SN109D6AR --Recovery
- c231f115-8205E6B-1003A9P --Incomplete
- c231f214-9179MHD-10014AP --No Connection
- junoe2dfp1 --No Connection
- jupe4bfp1 --No Connection**
- lpmclient1 --Running
- lpmclient10 --Running
- lpmclient13 --Running
- lpmclient14 --Running
- lpmclient15 --Running
- lpmclient19 --Running
- lpmclient3 --Running
- lpmclient4 --Running
- lpmclient5 --Running
- lpmclient7 --Running

One click will select all the partitions or select/deselect individual partitions

Please choose the Destination Servers you want to move to.

- BladeCenter --Operating
- PS701_ncis04 --Power Off
- PS704_ncis01 --Operating
- Server-8231-E2D-SN107E1EP --Operating
- Server-9109-RMD-SN109D6AR --Recovery
- c231f115-8205E6B-1003A9P --Incomplete
- c231f214-9179MHD-10014AP --No Connection
- junoe2dfp1 --No Connection
- jupe4bfp1 --No Connection
- jupe4dfp1 --No Connection**
- thoradfp1 --No Connection**

Can choose one or many destination servers

Notice: You can choose a entire Server or a set of LPARs within a Server.

Notice: The source Server and the destination Server can not be the same.

Cancel Next

This icon gets you to this screen

Remote/Restart – Placement



>>>> Choose Partitions >>>> Remote Restart Validate >>>> Current Task: Remote Restart

Partition Placement				
Reload	LPAR Name	CPU	Mem	Dest Server
	lpmclient11	0.3	4352	jupe4dfp1
	lpmclient12	0.5	3328	jupe4dfp1
	lpmclient14	0.3	3328	jupe4dfp1
	lpmclient15	1	4352	jupe4dfp1
	lpmclient17	0.3	4352	jupe4dfp1
	lpmclient19	0.5	3328	jupe4dfp1
	lpmclient20	0.25	4352	jupe4dfp1

Change dest server with Drop down

Partition Placement			
Reload	Dest Server	Remaining CPU	Remaining MEM
	jupe4dfp1	0.45	15872

As dest server is changed, the Remaining values change

Placement Policy

Packing Order

Place partitions on a single Server until it is fully utilized then move on to the next Server

Striping
Place partitions evenly across all Servers

Concurrent Count

8

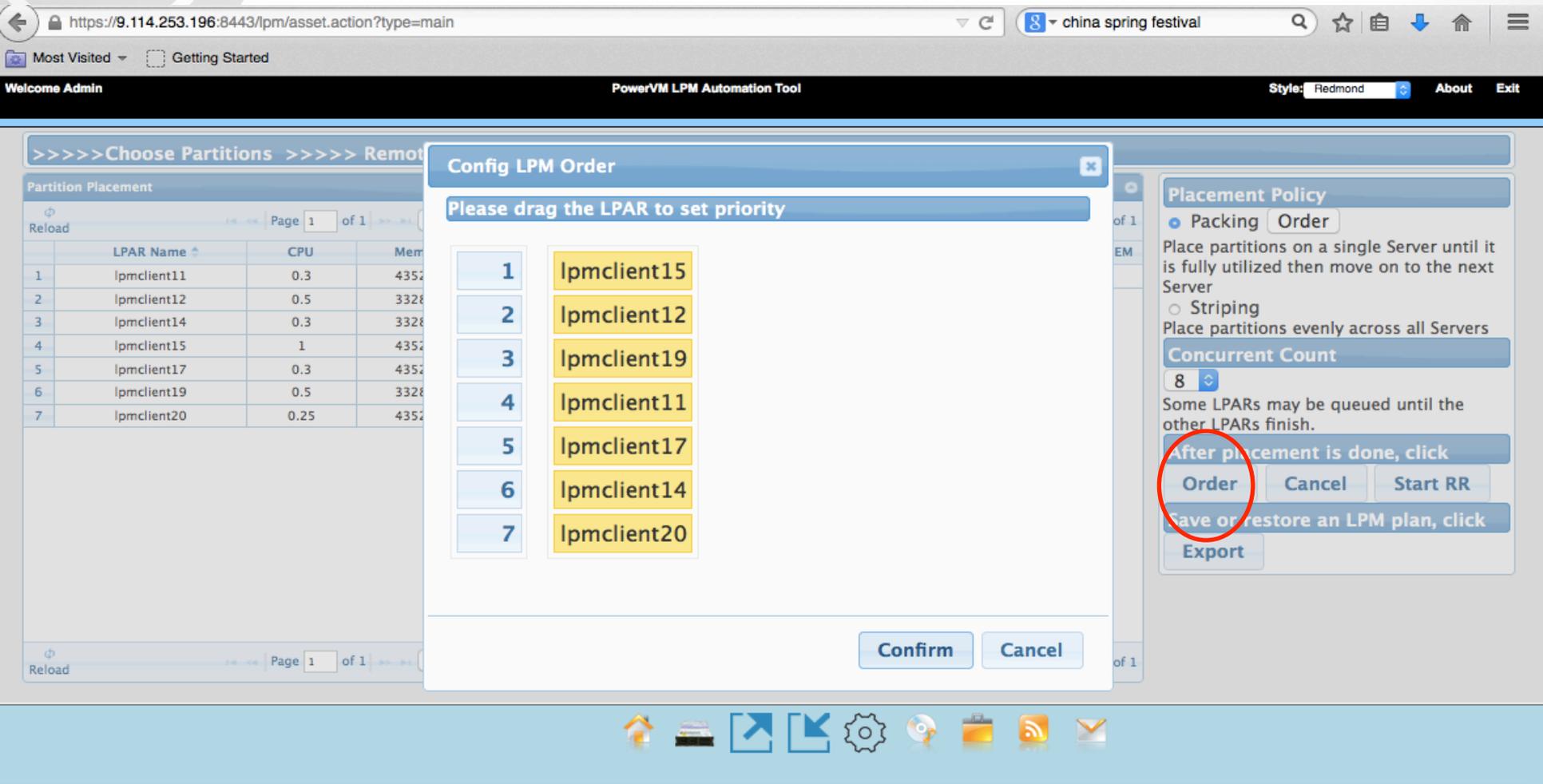
Some LPARs may be queued until the other LPARs finish.

After placement is done, click

Save or restore an LPM plan, click



Ability to change partition remote/restart order



The screenshot displays the PowerVM LPM Automation Tool interface. A modal dialog titled "Config LPM Order" is open, prompting the user to "Please drag the LPAR to set priority". The dialog contains a list of LPAR names, each associated with a priority number from 1 to 7. The LPAR names are: lpmclient15 (priority 1), lpmclient12 (priority 2), lpmclient19 (priority 3), lpmclient11 (priority 4), lpmclient17 (priority 5), lpmclient14 (priority 6), and lpmclient20 (priority 7). The dialog has "Confirm" and "Cancel" buttons at the bottom.

In the background, the "Partition Placement" table is visible, showing the following data:

	LPAR Name	CPU	Mem
1	lpmclient11	0.3	4352
2	lpmclient12	0.5	3328
3	lpmclient14	0.3	3328
4	lpmclient15	1	4352
5	lpmclient17	0.3	4352
6	lpmclient19	0.5	3328
7	lpmclient20	0.25	4352

The "Placement Policy" section on the right shows the "Packing" policy selected, with the "Order" option chosen. The "Concurrent Count" is set to 8. The "Order" button in the "After placement is done, click" section is circled in red.

Click and drag a partition name up or down. 1 goes first, then 2, etc

Creating Plans – changes for V8.5



- After you are done with the Placement Panel, you can Export that plan and continue to edit it further.
- Currently only the Destination Server can be edited in the plan

	A	B	C	D	E	F	G
	LPAR NAME	SOURCE SERVER	DEST SERVER	SOURCE LPAR ID	HMC IP	HMC NAME	COMMAND
1							
2	lpmclient11	thoradfp1	jupe4dfp1	15	mcmaster1.pok.stglabs.ibm.cor	Pok HMC	rrstartlpar -o restart -m thoradfp1 -p lpmclient11 -t jupe4dfp1
3	lpmclient12	thoradfp1	jupe4dfp1	6	mcmaster1.pok.stglabs.ibm.cor	Pok HMC	rrstartlpar -o restart -m thoradfp1 -p lpmclient12 -t jupe4dfp1
4	lpmclient14	thoradfp1	jupe4dfp1	9	mcmaster1.pok.stglabs.ibm.cor	Pok HMC	rrstartlpar -o restart -m thoradfp1 -p lpmclient14 -t jupe4dfp1
5	lpmclient15	thoradfp1	jupe4dfp1	8	mcmaster1.pok.stglabs.ibm.cor	Pok HMC	rrstartlpar -o restart -m thoradfp1 -p lpmclient15 -t jupe4dfp1
6	lpmclient17	thoradfp1	jupe4dfp1	4	mcmaster1.pok.stglabs.ibm.cor	Pok HMC	rrstartlpar -o restart -m thoradfp1 -p lpmclient17 -t jupe4dfp1
7	lpmclient19	thoradfp1	jupe4dfp1	13	mcmaster1.pok.stglabs.ibm.cor	Pok HMC	rrstartlpar -o restart -m thoradfp1 -p lpmclient19 -t jupe4dfp1
8	lpmclient20	thoradfp1	jupe4dfp1	12	mcmaster1.pok.stglabs.ibm.cor	Pok HMC	rrstartlpar -o restart -m thoradfp1 -p lpmclient20 -t jupe4dfp1
9							

- Version 8.5 will allow you to specify vfc_mappings and shared processor pool settings

Remote Restart Completed



PowerVM LPM Automation Tool

Welcome Admin Style: Redmond About Exit

>>>>Choose Partitions >>>> Remote Restart Validate >>>>Current Task: Remote Restart

Perform Remote Restart

View | Reload Page 1 of 1 15 View 1 - 3 of 3

	LPAR Name	Source Server	LPAR ID	Dest Server	LPM State	Last Time	Detail
1	lpmclient14	jupe4bfp1	16	thoradfp1	Succ	152 seconds	
2	lpmclient15	jupe4bfp1	17	jupe4dfp1	Succ	102 seconds	
3	lpmclient19	jupe4bfp1	20	thoradfp1	Succ	168 seconds	

View | Reload Page 1 of 1 15 View 1 - 3 of 3

Home, Server, Navigation, Settings, Refresh, Mail, RSS icons

- After the tool has Remote Restarted the LPARs on other servers, the old LPARs configurations need to be cleaned up on the failed server.
- Once the failed server is repaired and is back up running, the LPARs will still be on the server but you won't be able to activate them. You can view their configurations/profiles/BIOS mappings but you must use the RR Cleanup button to remove them from that repaired server.
- The tool has a GUI to do the cleanup named "RR Cleanup" (see next page for screen shots)

RR Cleanup



>>>> **Current Task: Choose Partitions** >>>> Remote Restart Validate >>>> Remote Restart

Please choose the partitions to be moved.

- Gregor HMC
- Pok HMC

Please choose the Destination Servers you want to move to.

Clean UP Partition

Please click Delete button to delete one partition.

Server Name	Partition Name	Operation
-------------	----------------	-----------

jupe4dfp1	lpmclient11	<input type="button" value="Delete"/>
-----------	-------------	---------------------------------------

Notice: You can choose a entire Server or a set of LPARs withi

the destination Server can not be the same.



Videos on youtube.com



These URLs are case-sensitive

ibm.biz/SRR_benefits

ibm.biz/LPM_overview

ibm.biz/LPM_scheduler

ibm.biz/SRR_tool

ibm.biz/LPM_PEP

Ibm.biz/SRR_bikeride fun video of an Admin performing SRR during lunch

The screenshot shows a web browser window with the YouTube search results for "powervm lpm automation tool". The search bar at the top contains the text "powervm lpm automation tool". The results list several videos:

- IBM Cloud Computing** (AD) by IBM • 82,153 views
Make Business Easier W/a Cloud That Connects to Your Systems. Watch Now
0:31
- Smarter Planet GREEN IT** (AD) by dbivideo • 14,981 views
44% Energy Savings and Much More San Mateo IIC Demonstration
9:53
- LPM Automation Overview - pre-GA** by bob foster • 6 minutes ago • No views
This video shows many of the features of the PowerVM LPM Automation tool. This is the pre-GA version of the video.
14:47
- LPM Away detailed video - pre-GA** by bob foster • 13 minutes ago • No views
This video shows the LPM Away features of the PowerVM LPM Automation tool. This is the pre-GA version of the tool but shows ...
11:19

The left sidebar shows navigation options like "What to Watch", "My Channel", "My Subscriptions", "History", and "Watch Later". Below that is a "SUBSCRIPTIONS" section with "Add channels" and a list of categories: Popular on YouTube, Music, Sports, and Gaming. At the bottom of the sidebar are "Browse channels" and "Manage subscriptions". The right side of the page features an advertisement for "EXTOL BUSINESS INTEGRATOR" with the text "Build & manage automated processes with the EXTOL Business Integrator." and a "NEW" badge.

- This tool is delivered as-is. You can email me for any problems/enhancements you would like.
- The goal is to fix any issues as quick as possible but depending on our availability, it may take some time.
- However, with the Excel Plans, even if the tool is broken, you should be able to complete a maintenance window by using the HMC commands in the Excel spreadsheet.
- The tool will be loaded into Resource Link which IBM customers have access to.
- Updates to the tool will be loaded into Resource Link
- The customer can subscribe to updates on the web site.
- **The customer has unlimited use of the tool throughout their enterprise without maintenance or license fees**

Missioned to help your clients Deploy and Exploit IBM's technology *▪ Team of 1100+ consultants WW, able to engage where required*

- Accelerate adoption of systems and storage with infrastructure services
- **Differentiate with deep technical skills, methodologies, and assets**
- Deploy systems and storage infrastructure on-site with clients
- Execute on a unique cost recovery business model rather than a P&L, with great emphasis on 1) client satisfaction and 2) skills enablement

Power Systems (NEW! includes Migration Factory)

- Storage
(includes Platform Computing)
- zSystems
(includes LinuxOne)
- Executive Advisory Practices

IBM Systems Lab Services

- Helps BPs **progress sales and accelerate adoption** of IBM Systems
- **Engages with and compliments** the skills/capabilities of our BP teams
- **Does not compete** with or look to replace BP services (or follow-on opp)
- Ensures **BPs retain control** of their client relationships at all times

Working with IBM Systems Lab Services:

- Gives BPs **direct access to proven expertise** from top IBM consultants
- Provides short-term, on-site IBM services designed to solve complex challenges and then **transfer skills and best practices to BPs / clients**
- Helps BPs **grow sales and extend business scope** without the need to invest in advanced skills for every single new & emerging technology
- Utilizing Lab Services – at cost – can help BPs compete for more strategic opportunities, **reduce risk**, and maximize profits from services operations

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- **North America IBM i Opportunity Manager, Mark Even** even@us.ibm.com