

# CREATING SPOT INSTANCE IN AIX FOR RECOVERY

## What is Spot instance?

The Shared product Object Tree (SPOT) is a fundamental resource in the NIM environment. It is required to install or initialize all types of machine configurations.

A SPOT provides a /usr file system for diskless and dataless clients, as well as the network boot support for all clients. Everything that a machine requires in a /usr file system, such as the AIX® kernel, executable commands, libraries, and applications are included in the SPOT.

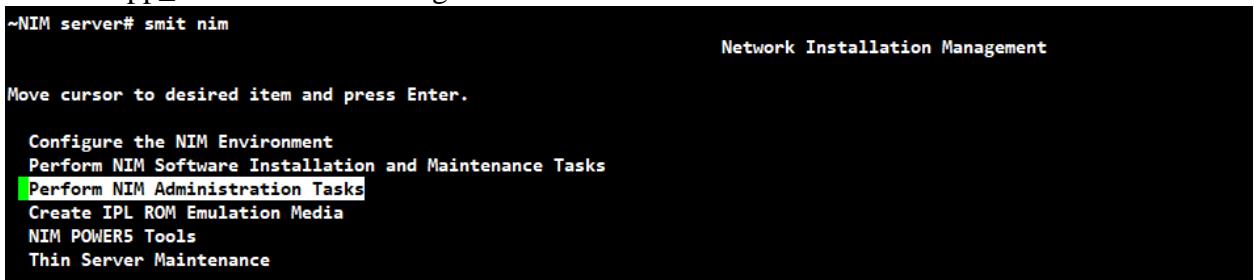
Machine-unique information or user data is usually stored in the other file systems. A SPOT can be located on any standalone machine within the NIM environment, including the master. The SPOT is created, controlled, and maintained from the master, even though the SPOT can be located on another system.

## What are the sources of creating spot instance?

- ❖ ISO images (Use the same server type of affected server ISO or download it from [IBM Entitled System Support](#))
- ❖ MKSYSB backup (Use the same server type of affected server)

## Use ISO image as lpp\_source to create a spot instance:

1. Download the similar version of base ISO image from [IBM Entitled System Support](#)
2. Save the image in NIM server.
3. Command to create lpp\_source:  
`# nim -o define -t lpp_source -a server=master -a location=<location of storing lpp_source> -a source=<location of ISO image> -a packages=all <lpp_sourcename>`
4. Create a lpp\_source from the image.



A screenshot of a terminal window titled "Network Installation Management". The command "smit nim" is entered at the prompt. The screen displays a menu with several options: "Configure the NIM Environment", "Perform NIM Software Installation and Maintenance Tasks", "Perform NIM Administration Tasks" (this option is highlighted with a green box), "Create IPL ROM Emulation Media", "NIM POWER5 Tools", and "Thin Server Maintenance". The text "Move cursor to desired item and press Enter." is displayed above the menu.

Select “Perform NIM Administration Tasks” and Enter.

# CREATING SPOT INSTANCE IN AIX FOR RECOVERY

```
Perform NIM Administration Tasks

Move cursor to desired item and press Enter.

Manage Networks
Manage Machines
Manage Control Objects
Manage Resources
Manage Groups
Backup/Restore the NIM Database
Configure NIM Environment Options
Rebuild the niminfo File on the Master
Change the Master's Primary Interface
Manage Alternate Master Environment
Unconfigure NIM
```

Select “Manage Resources” and Enter.

```
Manage Resources

Move cursor to desired item and press Enter.

List All Network Install Resources
Define a Resource
Change/Show Characteristics of a Resource
Show the Contents of a Resource
Remove a Resource
Perform Operations on Resources
Verify Resources
```

Select “Define a Resource” and Enter.

```
Manage Resources

Move cursor to desired item and press Enter.

List All Network Install Resources
Define a Resource
Change/Show Characteristics of a Resource
Show the Contents of a Resource
Remove a Resource
Perform Operations on Resources
Verify Resources

+-----+
| Resource Type |
+-----+
| Move cursor to desired item and press Enter. Use arrow keys to scroll. |
| [TOP]          |
| spot           = Shared Product Object Tree - equivalent to /usr fil |
| root           = parent directory for client / (root) directories |
| paging         = parent directory for client paging files |
| dump           = parent directory for client dump files |
| home           = parent directory for client /home directories |
| shared_home    = /home directory shared by clients |
| tmp             = parent directory for client /tmp directories |
| exclude_files  = files to be excluded when creating a mksysb or save |
| lpp_source     = source device for optional product images |
| installip_bundle = an installip bundle file |
| fix_bundle     = fix (keyword) input file for the cust or fix_query |
| bosinst_data   = config file used during base system installation |
| image_data     = config file used during base system installation |
| vg_data        = config file used during volume group restoration |
| mksysb         = a mksysb image |
| script          = an executable file which is executed on a client |
| resolv_conf    = configuration file for name-server information |
| savevg         = a savevg image |
| adapter_def   = directory containing secondary adapter definition f |
| linux_source   = resource containing Linux installation images |
| devexports     = device handling file used during wpar installation |
| savewpar       = a workload partition backup image |
| secattr         = security privileges file used during wpar installat |
| wpar_spec      = general specification file used during wpar install |
| [MORE...?]
```

Select “lpp\_source = source device for optional product images” and Enter.

# CREATING SPOT INSTANCE IN AIX FOR RECOVERY

Define a Resource

Type or select values in entry fields.  
Press Enter AFTER making all desired changes.

* Resource Name	[Entry Fields] [lpp_source_name<server_lpp>]
* Resource Type	[lpp_source]
* Server of Resource	[Press ESC+4 and select master]
* Location of Resource	[Location_of_ISO_image]
NFS Client Security Method	[]
NFS Version Access	[]
Architecture of Resource	[]
Source of Install Images	[]
Names of Option Packages	[]
Show Progress	[yes]
Comments	[int]

Fill the form with appropriate details and hit enter.

5. Verify the created lpp resource
  - a. **lsnim -c resources**
  - b. **lsnim -l <created resource name>**
6. Create spot instance by using created lpp\_source.

```
# nim -o define -t spot -a server=master -a location=<location of spot files> -a  
source=<lppsource_name> <spot_name>
```

-NIM server# smit nim

Network Installation Management

Move cursor to desired item and press Enter.

Configure the NIM Environment  
Perform NIM Software Installation and Maintenance Tasks  
**Perform NIM Administration Tasks**  
Create IPL ROM Emulation Media  
NIM POWER5 Tools  
Thin Server Maintenance

Select “Perform NIM Administration Tasks” and Enter

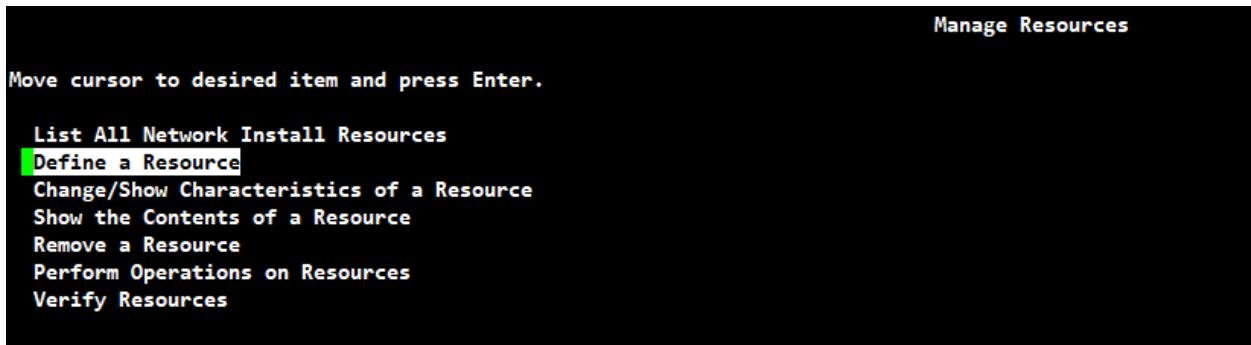
Perform NIM Administration Tasks

Move cursor to desired item and press Enter.

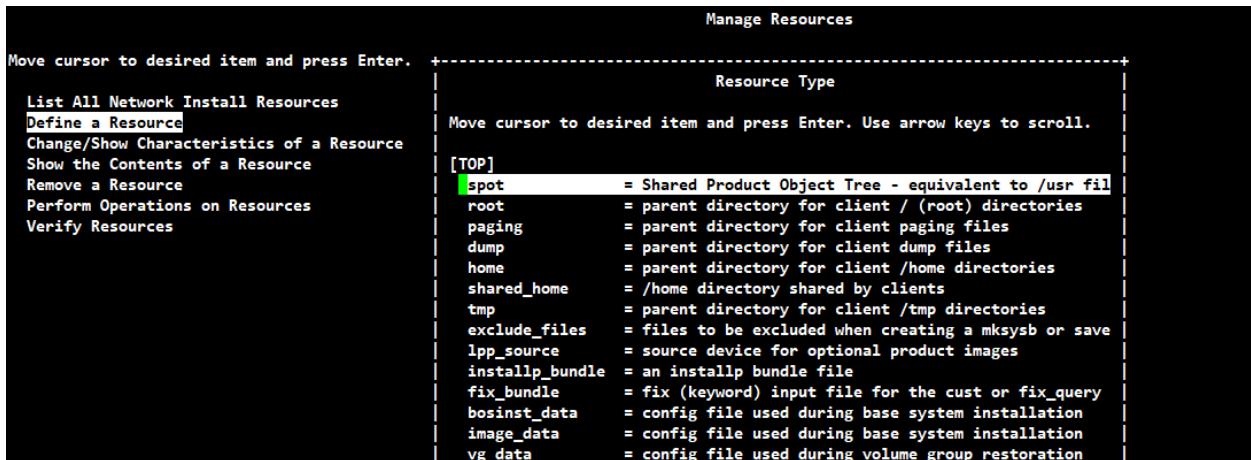
Manage Networks  
Manage Machines  
Manage Control Objects  
**Manage Resources**  
Manage Groups  
Backup/Restore the NIM Database  
Configure NIM Environment Options  
Rebuild the niminfo File on the Master  
Change the Master's Primary Interface  
Manage Alternate Master Environment  
Unconfigure NIM

Select “Manage Resources” and Enter.

# CREATING SPOT INSTANCE IN AIX FOR RECOVERY



Select “Define a Resource” and Enter.



Select “spot = Shared Product Object Tree - equivalent to /usr fil” and enter.



Fill the form with appropriate details and hit enter.

7. Verify the created spot
  - a. lsnim -c resources
  - b. lsnim -l <created spot name>

# CREATING SPOT INSTANCE IN AIX FOR RECOVERY

## Creating a mksysb resource in the client server:

1. Add the client server as machines in NIM server:

```
# nim -o define -t standalone -a if1=" <client name> 0" <client name>
```

**Note:** Verify the network settings should have proper network configuration

```
# lsnim -l <network name>
```

Network\_name:

```
class      = networks
type      = ent
Nstate    = ready for use
prev_state =
net_addr  = <client subnet first IP>
smm       = <client subnet mask>
routing1  = default <client gateway IP address>
```

2. Create a mksysb of similar version of affected server:

- a. For AIX server:

- i. mksysb -i <backup dir/backup\_file\_name>
- ii. Copy it to the NIM server

- b. For VIO server:

- i. /usr/ios/cli/ioscli backupios -mksysb -file <mksysb\_name> -nomedialib  
(Run as padmin)
- ii. backupios -mksysb -file <mksysb\_file\_name> -nomedialib (Run as root)
- iii. Copy it to the NIM server

3. Create spot instance by using created mksysb.

```
# nim -o define -t spot -a source=<created_mksysb> -a server=master -a
location=<location of spot files> <spot_name>
```

```
-NIM server# smit nim
                                         Network Installation Management

Move cursor to desired item and press Enter.

Configure the NIM Environment
Perform NIM Software Installation and Maintenance Tasks
Perform NIM Administration Tasks
Create IPL ROM Emulation Media
NIM POWER5 Tools
Thin Server Maintenance
```

## CREATING SPOT INSTANCE IN AIX FOR RECOVERY

Select “Perform NIM Administration Tasks” and Enter

## Perform NIM Administration Tasks

Move cursor to desired item and press Enter.

- Manage Networks
- Manage Machines
- Manage Control Objects
- Manage Resources**
- Manage Groups
- Backup/Restore the NIM Database
- Configure NIM Environment Options
- Rebuild the niminfo File on the Master
- Change the Master's Primary Interface
- Manage Alternate Master Environment
- Unconfigure NIM

Select “**Manage Resources**” and Enter.

Manage Resources

Move cursor to desired item and press Enter.

List All Network Install Resources

**Define a Resource**

Change/Show Characteristics of a Resource

Show the Contents of a Resource

Remove a Resource

Perform Operations on Resources

Verify Resources

Select “**Define a Resource**” and Enter.

Manage Resources	
Move cursor to desired item and press Enter.	+-----+ Resource Type
List All Network Install Resources	Move cursor to desired item and press Enter. Use arrow keys to scroll.
Define a Resource	[TOP]
Change/Show Characteristics of a Resource	spot = Shared Product Object Tree - equivalent to /usr fil
Show the Contents of a Resource	root = parent directory for client / (root) directories
Remove a Resource	paging = parent directory for client paging files
Perform Operations on Resources	dump = parent directory for client dump files
Verify Resources	home = parent directory for client /home directories
	shared_home = /home directory shared by clients
	tmp = parent directory for client /tmp directories
	exclude_files = files to be excluded when creating a mksysb or save
	lpp_source = source device for optional product images
	installp_bundle = an installp bundle file
	fix_bundle = fix (keyword) input file for the cust or fix_query
	bosinst_data = config file used during base system installation
	image_data = config file used during base system installation
	vg_data = config file used during volume group restoration

Select “spot

= Shared Product Object Tree - equivalent to /usr fil” and enter.

# CREATING SPOT INSTANCE IN AIX FOR RECOVERY

Define a Resource

Type or select values in entry fields.  
Press Enter AFTER making all desired changes.

* Resource Name	[Entry Fields] [<server_spot>]
* Resource Type	spot
* Server of Resource	[Press ESC+4 and select master]
Source of Install Images	[Press ESC+4 and select the mksysb]
* Location of Resource	[FS_to_store_spot_resource]
NFS Client Security Method	[]
NFS Version Access	[]
Expand file systems if space needed?	yes
Comments	[]
installlp Flags	
PREVIEW only? (install operation will NOT occur)	no
COMMIT software updates?	no
SAVE replaced files?	yes
AUTOMATICALLY install requisite software?	yes
OVERWRITE same or newer versions?	no
VERIFY install and check file sizes?	no

Fill the form with appropriate details and hit enter.

4. Verify the created spot
  - a. **lsnim -c resources**
  - b. **lsnim -l <created spot name>**

## Allocate the spot instance to the affected server in NIM master server:

1. Allocate the created spot instance to affected server:
2. Command: #nim -o maint\_boot -a spot=<created spot name> <affected server name>  
OR

~NIM server# smit nim

Network Installation Management

Move cursor to desired item and press Enter.

Configure the NIM Environment
Perform NIM Software Installation and Maintenance Tasks
<b>Perform NIM Administration Tasks</b>
Create IPL ROM Emulation Media
NIM POWER5 Tools
Thin Server Maintenance

Select “Perform NIM Administration tasks” and Enter.

Perform NIM Administration Tasks

Move cursor to desired item and press Enter.

Manage Networks
<b>Manage Machines</b>
Manage Control Objects
Manage Resources
Manage Groups
Backup/Restore the NIM Database
Configure NIM Environment Options
Rebuild the niminfo File on the Master
Change the Master's Primary Interface
Manage Alternate Master Environment
Unconfigure NIM

Select “Manage Machines” and Enter.

# CREATING SPOT INSTANCE IN AIX FOR RECOVERY

```
Manage Machines

Move cursor to desired item and press Enter.

List All Machines
Define a Machine
Change/Show Characteristics of a Machine
Specify New Master for Client Machine
Remove a Machine
Manage Network Install Interfaces
Manage Network Install Resource Allocation
Perform Operations on Machines
Query Remote Machine
Manage Secondary Adapter Definition Files
```

Select “Perform Operations on Machines” and Enter.

Select the affected server name and enter.

```
+-----+
          Operation to Perform

Move cursor to desired item and press Enter. Use arrow keys to scroll.

diag           = enable a machine to boot a diagnostic image
cust           = perform software customization
bos_inst       = perform a BOS installation
maint          = perform software maintenance
reset          = reset an object's NIM state
fix_query      = perform queries on installed fixes
check          = check the status of a NIM object
reboot         = reboot specified machines
maint_boot    = enable a machine to boot in maintenance mode
showlog        = display a log in the NIM environment
lppchk         = verify installed filesets
restvg         = perform a restvg operation
linux_inst     = operation to install Linux onto a standalone
lswpar         = show the characteristics of a workload partition
syncwpar       = synchronize workload partition software with the
showdump       = Show the location of a client dump
snap            = collect a snap record from a client
update_all     = update all currently installed filesets
```

Select the “**maint\_boot**        = enable a machine to boot in maintenance mode” and enter.

Select the created spot resource and enter.

Reference Links:

[Using NIM to boot into Maintenance Mode](#)

[Booting AIX into Maintenance Mode Using the HMC](#)

[NIM error warning messages](#)