NAME
nsrjb – NetWorker jukebox-control command

SYNOPSIS
nsrjb [ -C ] [ -j name ] [ -s server ] [ -v ] [ -f media device ] [ -S slots ] [ volume name ]
nsrjb
   -L [ -j name ] [ -s server ] [ -gnqvMG ] [ -Y ] [ -N ] [ -b pool ] [ -f media device ] [ -J hostname ] [ -e expire ] [ -c capacity ] [ -o mode ] [ -S slots ] [ -T tags ] [ -R | -B volume name ] [ -i ]
nsrjb
   -l [ -j name ] [ -s server ] [ -nvqrMRG ] [ -Y | -N ] [ -b pool ] [ -f media device ] [ -J hostname ] [ -e expire ] [ -c capacity ] [ -o mode ] [ -S slots ] [ -T tags ] [ -R | -B volume name ] [ -i ]
nsrjb
   -u [ -j name ] [ -s server ] [ -qvM ] [ -f media device ] [ -S slot ] [ -T tags ] [ volume name ]
nsrjb
   -I [ -j name ] [ -s server ] [ -Ev ] [ -f media device ] [ -S slots ] [ -T tags ]
nsrjb
   -p [ -j name ] [ -s server ] [ -v ] [ -f media device ] [ -S slot ] [ -T tag ]
nsrjb
   -o mode [ -j name ] [ -s server ] [ -Y ] [ -S slots ] [ volume name ]
nsrjb
   -H [ -j name ] [ -s server ] [ -E ] [ -v ]
nsrjb
   -h [ -j name ] [ -s server ] [ -v ]
nsrjb
   -U uses [ -j name ] [ -s server ] [ -S slots ] [ -T tags ]
nsrjb
   -V [ -j name ] [ -s server ] [ -v ]
nsrjb
   -d [ -j name ] [ -s server ] [ -v ] [ -Y ] [ -S slots ] [ -P ports ] [ -T tags ] [ volume name ]
nsrjb
   -w [ -j name ] [ -s server ] [ -v ] [ -S slots ] [ -P ports ] [ -T tags ] [ volume name ]
nsrjb
   -a [ -j name ] [ -s server ] [ -v ] [ -T tags ] [ -d ]
nsrjb
   -x [ -j name ] [ -s server ] [ -v ] [ -T tags ] [ -w ]
nsrjb
   -F [ -j name ] [ -s server ] [ -v ] [ -f media device ]

DESCRIPTION
The nsrjb program manages jukeboxes for NetWorker servers. Use the nsrjb command, rather than the nsrmm(8) command, to label, load, and unload the volumes contained within a jukebox. Only one nsrjb command can access a jukebox at a time. Two or more programs attempting to access the same jukebox simultaneously are synchronized using a timer lock on the file /nsr/tmp/<jukebox_name>.lck.

A volume is a physical piece of media, for example, a tape cartridge or optical disk. A jukebox refers to either a machine containing volumes, a mechanism to manipulate the volumes, and a device to access the volumes. Each volume within a jukebox and each jukebox has a name recognized by NetWorker. A volume name is specified when the volume is first labeled by NetWorker. The volume name can be changed when a volume is relabeled. The volume should have an external label displaying its volume name for
future reference. NetWorker refers to volumes by their volume names. For example, when requesting the
mount of a volume, NetWorker asks for it by *volume name*. The volume name *cleaning tape* may be used
to load a cleaning cartridge to clean a tape device.

Before using the `nsrjb` program, the jukebox and its device resources must be added to the NetWorker
server. To add the jukebox and its device resources to the NetWorker server, use either the `nwadmin` or `nsradmin` commands to create the device resources and then use `jbconfig` to create the jukebox resource.
The jukebox resource is described in `nsr_jukebox(5)`.

When a NetWorker server requires a volume for backup or recovery and an appropriate volume is not
already mounted, the server checks the media database to verify whether a jukebox has a volume stored in
it that satisfies the media request. If so, `nsrjb` is invoked to load the media into an idle device. It is impor-
tant to note that the *Available Slots* attribute does not limit what slots the user running `nsrjb` can operate on.
The only limitation enforced against the user is the physical range of slots that exist in the jukebox. The *Available Slots* attribute specifies the slots containing volumes available to automatically satisfy NetWorker requests for writable volumes. When automatically selecting a writable volume for backup, NetWorker only considers volumes from the list of available slots.

`nsrjb` attempts to determine which jukebox to use based on the options `-j`, `-f`, or a *volume name*. If one or
more of these options do not uniquely identify a jukebox and one must be selected, the `nsrjb` program
prompts you to select a jukebox. Alternatively, you can set the `NSR_JUKEBOX` environment variable to
the name of the jukebox you want the `nsrjb` program to use by default.

**OPTIONS**

`-b pool` Specifies the media pool to which the volume should belong. The pool may be any pool currently
registered with `nsrd`. The possible values can be viewed by selecting the Pools menu item from
the Media menu of `nwadmin(8)`. The pool name is referenced by `nsrd` when determining what
save sets can reside on the volume. If you omit this option the volume is automatically assigned to the *Default* pool. If you specify a pool name without a volume name `nsrjb` will use the next vol-
ume name associated with the specified pool’s *label template* resource. (See `nsr_label(5)`).

`-c` Overrides the volume’s default capacity (see `nsrmm(8)`).

`-B` Verifies that the volume currently being labeled does not have a readable NetWorker label. Before
labeling a volume, NetWorker attempts to read any existing labels associated with it. If you spec-
ify this option and the volume has a NetWorker label that is readable by the device currently being
used, the label operation is canceled and an error message is displayed. If the volume does not
have a label, or has a label that is not readable by the current device the volume can be labeled.
This option is used by `nsrd(8)` when labeling volumes automatically, when `nsrmmd(8)` makes the
request.

`-C` Displays the current volumes in the jukebox and the devices associated with the jukebox. This is
the default option. A list of slot numbers, volume names, media pools, optional bar code informa-
tion, and volume modes is produced. If the jukebox attribute *Bar Code Reader* is enabled and
there are bar code labels on the media volumes, then the bar code label will be included in the list.
If *Bar Code Reader* is set and the volume does not have a bar code label, a will be printed, indi-
cating that there is no bar code label on the media. The -C option does not perform an actual
jukebox inventory; `nsrjb` only reports on the volumes currently contained within the jukebox.
Volumes may be succeeded by one of the following flags: an *(R)*, indicates the volume is read-
only; an *(A)*, indicates the volume is either an archive or a migration volume. When combined
with the `-v` option, the capacity of the volumes that has been filled is also be displayed. Volumes
that are not contained in the NetWorker media database are marked with an asterisk, “*”.

The mode column contains additional information about the mode of the volume listed. The mode
field can have one of three values: *manually recyclable*, indicates that the volume will not be auto-
matically recycled/relabeled; *recyclable*, indicates that the volume is eligible for automatic recy-
cling; or when the mode field is blank, it indicates that neither of the other two values apply.
After the slot map is printed, a line about each device is displayed. For each enabled device, the following information is provided: the drive name, the device pathname, the slot number and name of the currently loaded volume, and an indication if NetWorker has the volume mounted. If the device is disabled, only the drive name and pathname will be displayed, along with the message disabled.

\-d
Deposits (loads into the jukebox) one or more cartridges from the cartridge access port(s). If \-d is used with a \-T tags option, then the command is assumed to be running on a silo, and is treated internally the same as if it had been run with the \-a \-d options. Specified volume tags (i.e. barcodes) will be deposited into the silo and then NetWorker will attempt to allocate them for its use. Depending on the exact type of silo used, this allocation step may or may not succeed. You should verify the success of the allocation, and retry the command with just the \-a option for all of the tag values specified. If the tags have already been allocated, you will see a message indicating this. This is not an error, and only means that the volumes had already been successfully allocated for NetWorker’s use.

\-e
Overrides the default volume expiration date (see \texttt{nsrmm}(8)).

\-E
Initializes element status for jukeboxes that provide this feature. You can use this option in conjunction with the \-I or \-H options. Some jukeboxes have the ability to keep track of whether or not there is media in a component in the jukebox. This feature is known as an "element status" capability. The \-V option may be used to determine whether a jukebox has this capability. When swapping media into the jukebox where media was not previously loaded, it may be necessary to re-inventory (\-I) the jukebox with the \-E option so the jukebox re-initializes its element status.

\-f media device
Specifies a media device rather than the jukebox control port. Use the pathname of the media device as it is configured in the jukebox resource. When more than a single media device has been configured for a jukebox, \texttt{nsrjb} will select the first available media device by default. The default device can be overridden using the \-f option.

\-g
This option is kept for historical reasons only, and has no affect.

\-G
This option is only used by the server to have the autoloader mount or label a volume in a Network Data Management Protocol (NDMP) device.

\-h
Displays the actions and results of the past 120 jukebox commands issued. These include commands issued on the command line by the user or \texttt{nsrjb} commands that were started automatically by NetWorker. Starting in Version 5.5, many \texttt{nsrjb} commands issued from the command line will not actually perform the requested jukebox options. Instead, the manually run \texttt{nsrjb} sends a message to the NetWorker server process, which will then start the required \texttt{nsrjb} command(s). Therefore, it is not unusual to see two entries generated in the history for each command issued on the command line. Instances of \texttt{nsrjb} that are started by the server have an extra command line parameter set ( \-O \textless instance number\textgreater ). If you wish to change the number of command lines saved in the history, you may set the environment variable \texttt{NSRJB\_HISTORY\_COUNT} to a value between \texttt{20} and \texttt{2000}. Values smaller than \texttt{20} will result in \texttt{20} being used, and values larger than \texttt{2000} will result in \texttt{2000} being used. Also note that the \texttt{nsrjb} \-h command itself is not saved in the history.

\-H
Resets the jukebox hardware (and the NetWorker database representing the jukebox) to a consistent state. The jukebox clears the transport and then unmounts and unloads volumes from the drives to slots. An actual inventory is not performed; (see the \-I option). If the jukebox senses that the inventory is out-of-date, it prints an appropriate message.

\-I
Performs an inventory on the jukebox’s contents. The volumes in the specified slots are loaded into a device and their labels are read. Use this option to ensure that the mapping between slot number and \textit{volume name} is correct. This option can take a long time to complete. For jukeboxes that have element status capability (for example, EXB-120, EXB-60, or HP optical), you can use the \-E option in conjunction with the \-I option to reinitialize the jukebox’s inventory state. The
-E option increases the amount of time it takes to inventory a jukebox, because the hardware must check every component, including all slots and drives, for the presence of media. You should only use this option if you are manually swapping media in or out of a jukebox.

If a jukebox has a bar code label reader and the jukebox resource attribute Bar Code Reader is set to Yes and the Cleaning Slots attribute to a non-empty range of slots (for further information see nsr_jukebox(8)). Volumes from slots that are reserved for cleaning cartridges are not loaded during the inventory of a jukebox. For jukeboxes that do not support element status or have a bar code reader, the -U option must be used to enter a cleaning cartridge into the jukebox’s inventory of a jukebox. For jukeboxes that support element status or have a bar code reader, cleaning cartridge slots that were previously empty but now contain a cartridge have the number of uses for the cleaning cartridge is the value set in the jukebox attribute Default Cleanings.

To allocate slots in a jukebox for cleaning cartridges set the jukebox resource attribute Auto Clean to Yes and the Cleaning Slots attribute to a non-empty range of slots (for further information see nsr_jukebox(8)). Volumes from slots that are reserved for cleaning cartridges are not loaded during the inventory of a jukebox. For jukeboxes that do not support element status or have a bar code reader, the -U option must be used to enter a cleaning cartridge into the jukebox’s inventory of a jukebox. For jukeboxes that support element status or have a bar code reader, cleaning cartridge slots that were previously empty but now contain a cartridge have the number of uses for the cleaning cartridge is the value set in the jukebox attribute Default Cleanings.

−j name
Specifies a particular jukebox to use. The given name is the one assigned by the user when the jukebox resource is created. This option overrides the NSR_JUKEBOX environmental variable.

−J hostname
Specifies a particular hostname to use. Drive selection by nsrjb will be restricted to a drive on the given hostname. This option can be used with the -l (load) or -L (label) options, and cannot be used with the -f option.

−l Loads and mounts the specified volume. A specific volume or slot must by specified. This option can also be used to clean a device by loading a cleaning cartridge. To load a cleaning cartridge use the volume name cleaning tape or specify a slot that has been set aside for a cleaning cartridge. When the volume name cleaning tape is used to load a cleaning cartridge and more than one cleaning cartridge in the jukebox has uses left, the cleaning cartridge selected is the one with the fewest remaining uses. See −I for a discussion of how the slots of a jukebox are set aside for cleaning cartridges. The -f option can be used to specify a media device.

−L Labels the volumes in the specified slots. Names for volumes are generated by referencing the label template resource for the given pool. If you do not specify any slots, the range of slots described in the NSR_JUKEBOX resource for the jukebox. When more than one volume is being labeled and the first volume name is specified, the volume name must match the template of the given pool. If just one volume is being labeled, only the regular NetWorker volume name restrictions apply. Labeling a complete jukebox may take a long time.

If the jukebox has a bar code label reader and the NSR_JUKEBOX resource attributes Bar Code Reader and Match Bar Code Labels are set, then the volume label is derived from the bar code label on the media, and the media bar code label is stored in the NetWorker media database. If the jukebox resource attribute Match Bar Code Labels is not set, then the volume label is derived from the label template, and the media bar code label is still stored in the NetWorker media database so that it can be used during inventory operations.

Volumes located in slots set aside for cleaning cartridges can not be labeled. See −I for a discussion of how the slots of a jukebox are set aside for cleaning cartridges.

To label a range of slots that may have empty slots in it, add a −i option to the command line, and empty slots will be ignored (although informational messages about those empty slots will be
−M Sends messages to the NetWorker daemon reporting progress and errors. This is used by nsrd(8) when mounting, unmounting and labeling volumes in response to requests made by nsrmmmd(8), and is not normally required for when nsrjb is run manually. If you use the -M option with a manual run of nsrjb then you should also specify the jukebox (-j or -f). This enables nsrjb to choose a jukebox, when there are many jukeboxes to choose from.

−n When specified with the −l option, loads, but does not mount, the volume. NetWorker is not notified that this volume has been loaded. This option enables nsrjb to control a jukebox containing non-NetWorker volumes.

−N Tells nsrjb to skip the confirmation prompt when used in conjunction with the −LR options. When NetWorker recycles volumes, NetWorker will prompts you to confirm that it is okay to overwrite any volumes considered to be non-recyclable. See nsrim(8) for a discussion of the per-volume flags.

−o mode
Sets the mode of a volume or range of slots. The following mode values are available: [not]recyclable, [not]readonly, [not]full or [not]manual. The [not]manual modes are only valid when used in conjunction with the −L option. If the −Y option is not used, you are prompted to confirm the operation for each volume. See nsrim(8) for a discussion of the per-volume flags.

−p Verifies and prints a volume label. A slot and/or device may be specified (see nsrmm(8)).

−P Port(s). Specifies a cartridge access port or range of ports to load/unload volume(s). Ranges are specified as low to high. Both low and high must be integers; low must be less than or equal to high. Both numbers are checked for validity against the resource describing the jukebox. Only one port range can be specified at a time.

−q Runs the nsrjb program in quiet mode. Turns off all of the messages normally produced when labeling, loading, or unloading volumes. This option can only be used in conjunction with the −L, −l, or −u options.

−R Recycles the volume(s). If a volume is recyclable, you are not prompted for confirmation as to whether or not this volume may be overwritten. See nsrmm(8) for a discussion of the per-volume flags.

−r Loads the volume as read-only. This option can only be used in conjunction with the −l option. See nsrmm(8).

−s server
Specifies the controlling server when nsrjb is used on a storage node. In order to use nsrjb on a storage node, it must be run on the node. See nsr_storage_node(5) for additional information on storage nodes.

−S Slot(s). Specifies a slot or range of slots to operate on. The −l and −u options only accept one slot; the other options accept a range of slots. Specify the slot range from low to high integer order. Both low and high must be integers; low must be less than or equal to high. Both numbers are checked for validity against the resource describing the jukebox. Only one slot range can be specified at a time.

−u Unloads a volume from a device from a device or a slot.

−U uses Sets the number of times a cleaning cartridge can be used. Slots can also be specified. Any slot specified must be in the range of slots set aside for cleaning cartridges in the jukebox. If a range of slots is not specified, all slots set aside for cleaning cartridges in the jukebox have the number of times the cleaning cartridge in that slot may be used updated. For slots that are currently empty in the jukebox’s inventory, this option updates the inventory to indicate that the slot is occupied by a cleaning cartridge. See −I for a discussion of how slots of a jukebox are set aside for cleaning cartridges.
uses must be either a positive integer, remove or default. The special value remove can be used (for example, -U remove) to delete the given cleaning cartridge(s) from NetWorker’s inventory. Specifying default sets the number of times a cleaning cartridge may be used to the value of the default cleanings attribute for the jukebox (see nsr_jukebox(5)).

You can use the -T option in conjunction with the -U option to add cleaning cartridges to a Silo Tape Library (STL). This option also sets aside a slot in the STL for each cleaning cartridge added. For a description of how to remove cleaning cartridges from an STL, see -x. See -I for a discussion of how slots in a non-STL jukebox are set aside for cleaning cartridges.

-v Displays vendor-specific status information. When combined with the -v option, the configuration of the jukebox is displayed.

-T tags Specifies tags or barcodes of volumes in a STL. tags specifies a single volume tag or a volume tag template similar to a label template, see nsr_label(5). The volume tag template is a list of template fields separated by slashes "/". A template field is a constant alphanumeric string or an alphabetic or numeric range represented by the low and high value separated by ":". See also the corresponding example.

-x This option, when used in conjunction with the -T option, is used to remove volumes from a STL. The specified volumes are removed from the STL’s list of volumes available for use by a NetWorker server. A -w option can be added to withdraw or eject tapes from the silo or used to physically remove the tapes from the silo. The -w must appear after the -x on the command line. This function is normally handled by the silo management software, but is added here for ease of use. This option may not be supported on all silos supported by NetWorker. See -a for a description of how volumes are allocated for use by a NetWorker server.
EXAMPLES

Labeling volumes:
To label all of the volumes in a jukebox, use the −L option:
nsrjb −L

To specify a particular pool, use the −b option:
nsrjb −L −bOffsite

Labeling the volumes in slots 5 through 19:
To label the volumes in slots 5 through 19, use the −S option:
nsrjb −L −S 5−19

Labeling a volume with a non-standard name:
To label the volume in slot 20 with a name that does not match the label template associated with a pool, specify the name along with the −L option:
nsrjb −L −S 20 mars.special

When more than one volume is to be labeled, the name must match the label template associated with the pool. This ensures that nsrjb generates the subsequent names.

Labeling volumes with a standard name:
To label the volumes in slots 21 through 28, starting with a different name than that referenced by the label template associated with the pool resource, specify the first name along with the −L option. In order for nsrjb to generate the additional names, the specified name must match the layout of the label template.
nsrjb −L −bOffsite −S 21−28 Offsite.501

After labeling the volume in slot 21 with ‘Offsite.501’ nsrjb uses the label template to generate names for the volumes in slots 22 (‘Offsite.502’) through 28 (‘Offsite.508’). If the next volume name in the sequence for a label template is already in used, the name is skipped.

Loading a volume:
To load volumes, use the −l option.
nsrjb −l

nsrjb will select volumes to load into selected devices. nsrjb will continue loading volumes until all of the devices are loaded.

Loading specific volumes:
To load a volume named mars.001, specify the volume name along with the −l option:
nsrjb −l mars.001

To load the volume in slot 5, use the −S option:
nsrjb −l −S 5

To load the selected volume into device /dev/nrst1, include the −f option.
nsrjb −l −f /dev/nrst1 mars.0005

Load a cleaning cartridge to clean a device
To load the cleaning cartridge with fewest remaining uses into a device, use the volume name cleaning tape along with the −l option.
nsrjb −l cleaning tape

To clean a device by loading the cleaning cartridge in slot 6, use the −S option. Slot 6 must be a slot in the jukebox set aside for cleaning cartridges and must contain a cleaning cartridge with uses remaining.
nsrjb −l −S 6

If the jukebox contains more than one device, it is best to specify the device to be cleaned. To clean device /dev/nrst1, include the −f option.
nsrjb −l −f /dev/nrst1 "cleaning tape"
Unloading a volume

You can unload a particular volume, slot, or device. To unload volume mars.0028, use the -u option:

nsrjb -u mars.0028

to unload the volume in slot 28, use the -S option:

nsrjb -u -S 28

to unload the volume in device /dev/nrst3, use the -f option:

nsrjb -u -f /dev/nrst3

Displaying the jukebox's current volumes

To display a list of slots and volumes, and which volumes are loaded into a jukebox's devices, use the -C option:

nsrjb -C

The -C option is the default and is used when no other options are selected. A range of slots may also be specified. For example, to display the volumes in slots 10 through 23, use the -S option:

nsrjb -S 10-23

Setting the number of uses for a cleaning cartridge:

To set the number of times all cleaning cartridges in a jukebox may be used to 12, use the -U option:

nsrjb -U 12

To set the number of times the cleaning cartridge in slot 10 may be used, use the -S option:

nsrjb -U 25 -S 10

Slot 10 must be a slot set aside for cleaning cartridges in the jukebox.

Inventorying the volumes:

To reconcile the actual volumes and the list of volumes produced by nsrjb, use the -I option. Each volume may be loaded into a device and examined for a NetWorker label (depending on bar code settings and other factors). The internal list is then updated with the new information. After all volumes have been examined, the new list is compared to the NetWorker media database, and a message listing any volumes located in the jukebox but not in the database is produced. To inventory the volumes in slots 17 through 43, use the -S option:

nsrjb -I -S 17-43

Like labeling, volume inventory involves considerable time.

Using the NetWorker notification system:

When NetWorker needs a volume, a "media event" is generated. To have nsrjb automatically respond to these events, the NetWorker notification system is used. This notification resource is automatically generated.

Using the cartridge access port:

To withdraw cartridges from jukebox slot 7 through 11 to the cartridge access port 5 through 10, use the -w option along with the -S and -P options:

nsrjb -w -S 7-11 -P 5-10

to deposit cartridges into jukebox slot 8 through 10 from the cartridge access port 3 through 5, use the -d option along with the -S and -P options:

nsrjb -d -S 8-10 -P 3-5

Using barcode templates on tape libraries:

To add volumes with barcodes D001A, D002A, ..., D100A to the volumes available for NetWorker in the tape library:

nsrjb -a -T D/001-100/A
To deposit tapes labelled with barcodes D001A, D002A, ..., D012A into the silo and also to make
the volumes available for NetWorker in the tape library:

```
nsrjb −a −T D/001−012/A −d
```

To remove volume with barcode D055A from the volumes available for NetWorker in the tape
library:

```
nsrjb −x −T D055A
```

To remove volume with barcode D055A from the volumes available for NetWorker in the tape
library, and to withdraw it from the tape library physically (for example, for off-site storage):

```
nsrjb −x −T D055A −w
```

To label volumes with barcodes D010A, D011A, ... , D020A:

```
nsrjb −L −T D0/10−20/A
```

To add cleaning cartridge with barcodes C010A, that can be used the default number of time for
this jukebox:

```
nsrjb −U default −T C010A
```

FILES
/nsr/mm/mmvolume The NetWorker media database.
/nsr/res/nsrjb.res The jukebox resource descriptors.
/nsr/tmp/<jukebox_name>.lck The file used to synchronize nsrjb commands for the jukebox.

SEE ALSO
jbconfig(8), jbexercise(8), mminfo(8), nwadmin(8), nsr(8), nsrd(8), nsr_layout(5), nsr_device(5),
nsr_jukebox(5), nsr_notification(5), nsr_storage_node(5), nsradmin(8), nsrim(8), nsrmn(8),
nsrmmd(8), nsrwatch(8)

DIAGNOSTICS
Some errors have been classified and can be identified by the last three digits of the error number returned
by the nsrjb command. Non-classified errors are listed first.

**must be run by root**
A normal (non-super) user has attempted to use this command.

**No drives are available for use (busy, secure, or disabled).**
This message is logged when the jukebox tries to acquire a drive to satisfy a backup or recover
media request. If the drives are not actively saving or recovering, then the device is secured or dis-
abled. Devices are secured in the pool resources. Devices are enabled or disabled in the device
resources.

**All drives are busy or disabled.**
If the drives are not actively saving or recovering, then the device is disabled. Devices are enabled
or disabled in the devices window.

/dev/nrst2: verifying label, error opening: waiting to become ready
Some tape drives take time to position to the beginning of the tape. While repositioning, the
device cannot be accessed. After the tape reaches the correct position it is available for use and
nsrjb resumes. If the device does not have a tape loaded, an I/O error message similar to the fol-
lowing appears: read open error, I/O error (5).

**All volume names for ‘xyz’ are in use**
All the volume names for the given template have been used. The operator should change the tem-
plate to accommodate more volume names.

**No volumes found in the media database...continuing.**
The media database is empty. The user will typically see this message when the module has been
newly installed or all volumes have been deleted.
Another nsrjb is already running, please wait...
Another nsrjb command is accessing a jukebox. The current command will keep attempting to
access the device periodically. Once it has acquired the jukebox device, it will display the mes-
sage ‘Continuing.’

slot ‘xyz’ does not have a bar code label
An inventory operation was attempted with the jukebox resource attribute match bar code labels
enabled, while the media did not have a label. Either disable the attribute with nsradmin or
nwadmin, or place a bar code label on the media.

slot ‘xyz’ has a duplicate bar code label ‘xyz’
Two or more media volumes have the same bar code label attached. Either disable the attribute
with nsradmin or nwadmin, or place a unique bar code label on the media volume.

(001) Unknown jukebox model
The model for this jukebox is not known to the NetWorker jukebox module.

(006) Unknown control port
There is no control port listed for this jukebox.

(007) Invalid range
The given range could not be parsed by nsrjb.

(010) Source component empty
The jukebox attempted to move media between components in the jukebox, for example, from a
slot to a drive, but found nothing in the source component.

(011) Destination component full
The jukebox attempted to move media between components in the jukebox, for example, from a
slot to a drive, but found something already in the destination component.

(012) All slots full
The jukebox attempted to unload a drive as part of a reset (−H) operation, with all slots containing
media. Empty one of the slots or remove the media located in the drive from the jukebox.

(013) Slot xxx is empty.
Often seen during a label operation. The labeling process stops as soon as an empty slot is
encountered. If attempting to label a range of slots on jukeboxes with the ability to sense whether
or not the slots are loaded, the error message is as follows:

	Slot xxx is empty, attempted to label the slot range xxx-yyy. Specify a slot range which is full of
volumes. No volumes were labeled.

(016) Slot empty
The source slot did not have a volume in it.

(017) Unsupported operation
This jukebox does not have the functionality to support the requested operation.

(025) Vendor error occurred
Normally in this case you would not see the message Vendor error occurred. Instead, you would
see an error string retrieved directly from the jukebox or device driver. The operator should con-
sult the hardware/driver manual to determine the cause of the error.

(027) All drives full/busy
All drives are loaded and/or busy at the moment. Free up one of the drives by unloading the
device. If all drives are currently in use, you must wait for a drive to become idle.

(029) Unable to retrieve any volume information from the media database
Indicates that nsrjb could not access any volumes in the media database.

(036) All of the devices are in use by nsrmmd
The jukebox could not acquire a drive to use for a save or recover.

(038) **All drives must be unloaded before jukebox resource can be deleted**
You cannot delete a jukebox resource if any volumes are loaded in the media drives. Unload all media drives before attempting to delete the jukebox resource. If no devices are loaded, issue the `nsrjb` command with the `−H` option.

(039) **This command only valid with a single slot specified**
You can only specify a single slot is, not a range of slots, for example, `-S 4-6`, on which to operate.

(040) **The drive is loaded with a volume from a different slot**
The user specified both a volume and the `−f` option were specified, but the drive already has a volume loaded from a different slot.

(041) **The drive is empty**
Both a volume loaded on which to operate.

(042) **Will not overwrite volume without confirmation**
NetWorker does not allow you to over-write a volume with a valid NetWorker label without confirmation.

(043) **The volume name does not match what has been inventoried.**
Please re-inventory the volume." The jukebox encountered a volume with a different label than expected. The operator should re-inventory the jukebox.

(044) **The volume from that slot is loaded in another drive**
The user specified both the `−f` and `−s` options, but the volume from the given slot is loaded in another drive.

(045) **The volume does not exist in the jukebox**
The named volume is not loaded in the jukebox.

(047) **The alternate side of the media is busy**
The other side of the optical media is in use. The side you are trying to access is unavailable until the alternate side is idle.

(048) **Too many devices**
The user tried to add too many devices during the creation of the jukebox.

(049) **Unlabeled volume, loaded but not mounted**
The user tried to load a volume but no label was found on the media.

(050) **Drive door closed**
The user was trying to perform an unload operation. When the jukebox went to move the media from the drive to a slot, the transport found the media drive door closed.

(051) **Unable to select a suitable volume in response to media request**
The jukebox module could not find any volumes in the devices to respond to a media request.

(054) **The drive is busy. Please try again later.**
An operation was attempted on a media device assigned a save or recover session. Try the operation again later when the media drive is free.

(055) **No element status capability for this jukebox. -E ignored.**
The jukebox does not have element status capability. The `-E` option is ignored.

(056) **The drive is disabled. Enable the drive or choose another.**
The media drive specified is disabled. If this media device is the only one in the jukebox, then it must be enabled for use by `nsrjb`. If there are other media devices enabled, try selecting one of them.

(057) **The media pool is not allowed on this device.**
The media drive specified is not allowed to mount volumes from the media pool specified. Either change the media pool configuration to allow mounts of the pool on this device, or try using
another device.

**058) All the media drives are disabled.**

All the media drives are disabled. Enable one or more devices or select another jukebox or media device outside the currently selected jukebox.

**059) The media pool is not allowed on any of the drives.**

None of the media drives in this jukebox are allowed to mount volumes from the media pool specified. Either change the media pool configuration to allow mounts of the pool on these devices, or try using another jukebox device or media device outside the currently selected jukebox.

**060) All drives are busy, disabled, or do not allow media from this pool.**

See error descriptions (027), (058), and (059). Some combination of these three errors is preventing the requested operation.

**062) Can only reset jukebox when all drives are idle.**

When attempting to unload a media device, the device was found to be busy. Wait for the device to become idle and reattempt the reset operation.