

# 6.x to 6.x Disk Conversion Guide

2700-1395-B1

Contents ©Copyright 2002, Mitel Networks Corporation

Distributed Courtesy of



**8777 E. Via De Ventura Suite #340  
Scottsdale, Arizona 85258**

**Main: (480) 998-9500  
Fax: (480) 718-7355**

**<http://www.legacyvoicemail.com>**

**Support: [support@legacyvoicemail.com](mailto:support@legacyvoicemail.com)  
Sales: [sales@legacyvoicemail.com](mailto:sales@legacyvoicemail.com)  
General: [info@legacyvoicemail.com](mailto:info@legacyvoicemail.com)**

## 6.x Disk Conversion

### Disk Conversion Utility Overview

The Drive Conversion feature included with software Release 6.1 is used to transfer configuration, account, and user speech data from a drive originally formatted and partitioned for Release 6.0 to a drive formatted and partitioned for Release 6.1.

### Disk Conversion Functionality

Release 6.1 systems require a larger QNX software partition for correct operation. Release 6.1 requires a 200 MB QNX partition. Release 6.0 required only 40 MB for the QNX partition.

To support the larger QNX partition, the information on the primary system drive on SCSI Bus 0 (drive 0:0) must be transferred onto a drive which has the capacity and formatting to support the 200 MB QNX partition. The conversion software accomplishes the task of moving the data to a higher capacity drive with the correct formatting.

**Note:** Some conversion tasks, such as increasing speech hours on a drive, might require an additional purchase. Contact your distributor for details.

Updating your system software requires more memory. A 6.1 system requires 64-96 MB of memory in each module. Contact your distributor for additional information.

### Increased Storage Hours

Software release 6.1 supports increased storage hours on the larger capacity drives. For the primary system drive (ID 0:0), the drive conversion software creates additional speech account sectors to support increased system hour capacity in addition to setting up the QNX software partition and transferring the existing data. The other primary drives resident on the software release 6.0 systems which hold speech and account data (no QNX partition) may also be converted to take advantage of the increased storage hours available with the 6.1 software.

### Drive Conversion Feature Summary

In summary, the drive conversion feature handles the following issues:

- For the primary system drive (0:0), the conversion creates a 200 MB QNX software partition to support the increased system requirements for 6.1 software.
- For all primary drives, the number of account sectors and storage hours have been increased.

---

### Applicability of 6.x Drive Conversion

Use 6.x Drive Conversion after you update your system software from 6.0C to 6.1.

Convert only your primary drive (0:0), leaving other drives intact, when the purpose of the drive conversion is to increase the QNX partition size.

### For Systems with Redundant Disks

If you are only upgrading your primary hard disk to change the QNX partition size, and you have redundant drives, you must disable the redundant mate for drive 0:0 (S-R-R-B-R from the Main Menu), then remove the redundant drive (S-R-R-B-D-R from the main menu) in software, and physically remove the drive. After the conversion, you must replace the redundant drive, and make a redundant drive for the primary drive (S-R-R-B-D-M from the Main Menu). To make the redundant drive current, update redundancy (S-H-K from the Main Menu) after the conversion is complete.

### 6.0C to 6.1 Software Disk Conversion

After you update your 6.0C software to 6.1 software, you must create a 200MB QNX partition. Release 6.1 software supports some larger drive capacities than 6.0C software. Table 1-1 and Table 1-2 list the partition sizes required for different releases of software on IDE and SCSI hard disks.

**Table 1-1 IDE Hard Disk Partition Sizes**

Software Revision	500MB		1GB		2GB	
QNX(MB)	Speech(hrs)	QNX(MB)	Speech(hrs)	QNX(MB)	Speech(hrs)	
6.0C	40	55	n/a	n/a	n/a	n/a
6.1	Not supported in 6.1		200	90	200	210

**Table 1-2 SCSI Hard Disk Partition Sizes**

Software Revision	1GB		2GB		4GB	
QNX(MB)	Speech(hrs)	QNX(MB)	Speech(hrs)	QNX(MB)	Speech(hrs)	
6.0C	40	120	40	240	n/a	n/a
6.1	200	120	200	240	200	480

---

### Available Conversions

The 6.x Drive Conversion feature performs the following conversion tasks:

- Conversion between different-sized IDE or SCSI drives
- Partition size conversion, for example conversion from a 40MB QNX partition to a 200MB QNX partition to prepare your hard disk for installation of 6.1 software

Table 1-3 lists the conversions which are supported by the 6.x Drive Conversion Feature.

<b>Table 1-3 Disk Conversions Facilitated by 6.x Drive Conversion Feature</b>				
<b>Drive Types</b>	<b>Source Drive</b>		<b>Destination Drive</b>	
<b>IDE Drives</b>	<b>Drive size</b>	<b>Partitions</b>	<b>Drive Size</b>	<b>Partitions</b>
500MB (or 1GB/2GB configured as 500MB)	40MB QNX 55 hours speech	1GB (or 2GB configured as 1GB)	200MB QNX 90 hours speech	
500MB or 1GB/2GB configured as 500MB)	40MB QNX 55 hours speech	2GB	200MB QNX 210 hours speech	
1GB (or 2GB configured as 1GB)	200MB QNX 90 hours speech	2GB	200MB QNX 210 hours speech	
<b>SCSI Drives</b>	<b>Drive Size</b>	<b>Partitions</b>	<b>Drive Size</b>	<b>Partitions</b>
1GB (or 2GB/4GB configured as 1GB)	40MB QNX 120 hours speech	4GB	200MB QNX 480 hours speech	
2GB (or 4GB configured as 2GB)	40MB QNX 240 hours speech	4GB	200MB QNX 480 hours speech	
1GB (or 2GB/4GB configured as 1GB)	40MB QNX 120 hours speech	2GB (or 4GB configured as 2GB)	200MB QNX 240 hours speech	

## General Drive Conversion Procedures

Initiate the following steps during a drive conversion. Each step is explained in more detail in the following section, "The Standard Drive Conversion Procedure in Detail."

1. Plan the conversion and prepare the destination disk drive(s).
2. Prepare the system.
3. Turn off the system and install the destination drive(s).
4. Boot the system, run maintenance, and run "convert.disk."
5. Select your conversion options.

6. Select your source drive.
7. Select your destination drive.
8. Complete the conversion.
9. Remove the old disk(s) and install the new disk(s).
10. Return system to normal operation and make/update redundancy.

---

## The Standard Drive Conversion Procedure in Detail

Perform the following steps for a successful drive conversion. Examples of different drive conversions follow this section.

### Plan the conversion and prepare the destination disk drive(s)

#### Plan the conversion.

See Table 1-3, "Disk Conversions Facilitated by 6.x Drive Conversion Feature," and Table 1-1, "IDE Hard Disk Partition Sizes" and Table 1-2, "SCSI Hard Disk Partition Sizes," to determine which conversion you want to perform.

For any disk conversion you want to perform, you must have a new drive or drives for the conversion. The drives are purchased from and authorized by the distributor for use in your system.

#### Prepare the disk drive.

To avoid disk conversion failure, purchase the destination disk from your distributor. This guarantees that the drive is fully authorized for use. In addition, in some cases you might have to change the drive's ID by physically changing a jumper on the drive. Included with your new drive is a Tech Memo which details jumper settings and ID information.

### Prepare the system

1. Run an Online System Verify.
2. Perform a floppy or zip backup (CP 5703 in your 6.x *Installation and Service Manual* for the floppy backups or your Zip Drive Manual for zip drive backups).
3. If the drive you are converting has a redundant mate, remove it in software using the "remove a disk of redundant pair" option (S-R-R-B-D-R from the Main Menu). This step will require use of the 6.1 Service Diskette. Then physically remove the drive.



---

#### CAUTION!

You **must** disable and remove the redundant mate of any drive you are converting, or the conversion will fail.

---

4. Shut down the system. On a Model 640, disable all modules (CP 5700).

### Turn off the system and install the destination drive(s)

#### Turn off the system.

Shut down the NuPoint Messenger system.

### Connect the destination drive.

Connect the destination drive using the proper cable to an unused ID location.

**On a Model 70 or 120I**, set the jumpers on the drive to indicate that the drive is a secondary or slave hard disk drive.

**On a Model 120S**, assign the drive an unused SCSI ID.

**On a Model 640**, your drive is automatically assigned a SCSI ID. Connect it to an unused SCSI slot and note the ID.

**Note:** For a single-module 640 system, it is recommended that you install the destination drive in slot 3. For a multi-module system, it is recommended that you install the destination drive in slot 3.

### Boot the system, run maintenance, and run "convert.disk."

**Note:** You need your 6.1 Service Diskette available to complete this procedure.

1. Turn on your system.

**On a Model 640**, turn on your SCSI storage subsystem, then turn on your power supply.

**On a Model 70, 120I, or 120S**, simply turn on your system.

2. During the boot process, this prompt appears:

```
Run MAINTENANCE from hard disk? Y/N: [N]
```

Type **Y** to run maintenance from the hard disk.

**Note:** Depending on the system FPSA settings, you might be required to enter a superuser password to run maintenance from the hard disk.

3. The following menu of options appears:

```
Choose one of the following activities:
.
..
console
convert.disk
diagnose
disable.options
fpsa
host.status
install.options
install.rsd
log.menu
prompts.add
qnx
system.restore
verify
Enter one of the names :
```

Type "convert.disk" and press Enter. You will be prompted to insert the 6.1 Service diskette:

Please insert Service disk and press Enter when ready.

Insert the 6.1 Service diskette and press **Enter**.

The following screen appears:

```
=====  C O N V E R T . D I S K  =====
```

Used to upgrade from a smaller capacity disk to a larger disk. Data on the new disk will be destroyed in the process.

Procedure:

1. Disable and remove redundant mate of original disk
2. Disable all modules.
3. Install new disk.
4. Perform convert.disk operation.
5. Physically replace original disk with new disk.
6. Enable other modules.

```
          *
        *****
       ***   ***
      ***     ***
     *** CAUTION! ***
    ***           ***
 *****
*****
```

```
=====
IF THIS IS NOT THE OPTION YOU WANT, PLEASE REBOOT THE SYSTEM.
CONTINUE? (Y/n)
```

Type **Y** to continue.

## Select your conversion options

The following menu appears:

```
---  CONVERSION MENU  ---
  1 - Disk Conversion
  2 - Re-enable Source Drive
  3 - Exit
```

Please make your selection (1-3):

Select the option you wish to use, type the number, and press Enter.

- For all conversions, this is option **1**.
- Use option **2** if a new drive has failed to work after the conversion process, and you wish to reinstall your original source drive.

## Select your source drive

### Source in a single-source conversion

The following prompt appears for a **single-source disk conversion**:

**Note:** These examples might vary from your configuration. Your actual disk address range might be different.

```
Please specify the SOURCE disk address
Hard disk ID must be in the following ranges:
0:0
Which Disk[bus:scsiId]?
```

Enter the drive ID, for example **0:0**.

### Source in a multiple-source disk conversion

The following prompt appears for a **multiple-source disk conversion**:

```
Please specify the SOURCE disk address
Hard disk ID must be in the following ranges:
0:0 0:1
First Source Disk [bus:scsiId]?
```

Enter the drive ID, for example **0:0**.

```
Second Source Disk [bus:scsiId]?
```

Enter the drive ID, for example **0:1**.

### Select your destination drive

The following prompt appears:

```
Please specify the DESTINATION disk address
Which Disk[bus:scsiId]?
```

Enter the ID of your destination drive, for example **0:3**

### Complete the conversion

After a pause of about twenty-five seconds, the following message appears:

```
Copying from [source disk] to [destination disk]
```

As the conversion completes, the screen is updated with progress messages.

The disk conversion can take from 45 minutes to two hours, depending on the disk types being converted and the systems being used. When the disk conversion completes, you see the following message:

```
Disk conversion process completed.
Power down the system.
Remove disk ID [source disk]
Readdress disk ID [destination disk] as [source disk]

CONVERT.DISK DONE, ENTER A CARRIAGE RETURN TO REBOOT THE SYSTEM.
```

At this point, press Enter and turn off the system.

### Remove the old disk and install the new disk

1. Remove the original hard disk(s).
2. If necessary, reconfigure the jumpers on the drives so the destination disk is configured as the original source disk.



3. Install the newly-converted disk in place of the source disk.

### Return system to normal operation and make/update redundancy

1. Turn the system power on.
2. If you have redundant disks, install a disk which is the same size as the new primary drive and make the disk redundant (S-R-R-B-D-M from the Main Menu). This creates a redundant mate for the primary drive.
3. Once you have made the redundant drive(s) on your system, update redundancy (S-H-K from the Main Menu) to synchronize the redundant disks.
4. If you have a multi-module 640 system, select **T** from the System Maintenance Menu to access the Module Maintenance Menu. Enable all modules (CP 7015).
5. Run an Online System Verify.

---

### Large Systems and Systems With Multiple Drives

For a multi-host system, or a system that has the maximum number of drives (all drive slots are used), follow this procedure for the conversion.

1. Update the system software from 6.0C to 6.1, if that is your goal.
2. If the drive you are converting has a redundant mate, physically remove this redundant drive. Then remove it in software using the "remove a disk of redundant pair" option (S-R-B-D-R from the Main Menu). This step will require use of the 6.1 Service Diskette.
3. Turn off the system.
4. Insert the new disk (for conversion) into the empty slot.
5. Turn on the system and enter maintenance mode. Disable all hosts.
6. Run `convert.disk`.
7. Choose option **1** from the convert disk menu  
1 Disk Conversion
8. Enter source and destination drive IDs.
9. The conversion program completes automatically.
10. After the conversion is complete, turn off the system. Remove the drives you have converted.
11. Swap the converted drive and the source drive. The converted drive is now the primary drive. If the primary drive requires a redundant mate, install a drive of matching capacity in the correct slot (for example, on a Model 640 with 2 hosts, install the redundant mate of 0:0 in 1:0). See your *Technical Reference Manual* for details.
12. Turn on the system.
14. Make the drive redundant (S-R-R-B-D-M from the Main Menu) to pair a redundant mate with the new primary drive.
15. Once all the drives have redundant mates again, update redundancy (S-H-K) to bring all drives into sync.

---

### Prompts

You must **reinstall all prompts after upgrading the software from 6.0 to 6.1.**

## Error Recovery

If the destination drive does not work properly, you must re-enable your source drive. To re-enable the source drive:

1. Turn off your system.
2. Reconnect your source and destination drives in their original, pre-conversion configurations.
3. Boot the system. The system displays errors during the boot cycle which you may ignore. The system enters maintenance mode.
4. Run `convert.disk`. You will need your 6.1 Service Diskette for this step.
5. Choose option **2** from the disk conversion menu  
2 - Re-enable Source Drive
6. The following messages are displayed:  

```
Primary source drive out of service
WARNING: If restoring primary source drive, the destination drive will be
disabled
Command: [R] Restore Primary Source Drive [X] Exit
```

Type **R** to restore the primary source drive.  
The following messages are displayed:  

```
Restoring primary source drive complete.
CONVERT.DISK DONE, ENTER A CARRIAGE RETURN TO REBOOT THE SYSTEM.
```
7. Hit **Enter** to reboot, and wait for the power-up cycle to start. Shut down the system.
8. Remove the disabled (destination) drive.