

PSN# PSN000855u

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Severity/risk level Medium

Urgency Immediately

Name of problem Modular Messaging MAS Drive Duplication procedure for S3500 series Rel 3.0

Products affected

Modular Messaging 3.0

Problem description

Modular Messaging customers require a procedure to create a duplicate of the MAS disk to provide for backup, repair, or recovery of the disk subsystem that is more effective and efficient than reinstalling the entire operating system and system software and reconfiguring the system.

This PSN contains a procedure to create a duplicate of the MAS disk onto a second identical disk. To be even more precise, the procedure is only intended for use with Avaya disks of the same make, model, size and geometry. The procedure describes how to install the Ghost 2003 software, physically install the second disk, create the backup image and finally, how to replace the original disk with the backup disk.

The MAS Drive Duplication procedure is intended to cover three scenarios:

- General disaster preparedness. The customer has no plans to upgrade and the existing disk is not failing. The customer is creating the drive duplicate as a precaution.
- Failing disk. The customer is starting to detect disk problems and wants to prepare to replace the failing disk.
- Upgrade preparation. The duplicate disk can be used to fall back to the previous release in the event that there are problems with the upgrade process. The release upgrade is for software only. The procedure assumes that the new version of the software will run on the same hardware platform as the old version.

Resolution

A wide variety of backup/restore products are available for this purpose, and although Avaya cannot recommend a specific third party product, the following procedure has been successfully tested in several environments.

### A. PARTS REQUIRED:

1 – 80GB IDE DISK - Comcode: 700330632

1 – Set of Flat Head Screws

1 – IDE cable - Comcode: 700253024

1 – Symantec GHOST 9.0 – The Ghost 9.0 package includes a Ghost 9.0 CD and a Ghost 2003 CD. The Ghost 9.0 CD is NOT used for this procedure. Only the 2003 version works with Windows 2000 Server.

### B. INSTALLATION - GHOST VERSION 2003 SOFTWARE:

1. Insert the Symantec GHOST 2003 CD in DVD-ROM.
2. The Norton Ghost 2003 Window should appear:  
If the Norton Ghost 2003 Window does not appear:  
Open a Windows Explorer window and select the (DVD-ROM DRIVE)  
D:\ncdstart.exe
3. Select "Install Norton Ghost 2003"
4. Select the defaults for the INSTALL.
5. When finished, remove the GHOST 2003 Software Installation Disk.

### C. INSTALLATION - HARDWARE for the S3500 series:

1. Shut Down the MAS and remove the Power cable.
2. Remove the top cover panel of the MAS.
3. Set jumpers on the additional 80GB IDE DISK to SLAVE for 16 HEAD. (Jumper setting options for Avaya disks are described on a label which is situated just above the jumpers on the rear of the disk.)
4. Remove the Power and IDE cable connections from the current IDE disk drive and the DVD-ROM drive.
5. Remove the top left disk container.
6. Remove the plastic insert from the container.
7. Attach the Top Left disk container to the additional 80GB IDE DISK. **NOTE:** Only use Flat Head Screws or it will not be possible to slide the disk container back into the slot.
8. Install additional IDE DISK in the open Top Left Slot next to the current disk drive.
9. Set jumper on DVD-ROM to MASTER. This might be done without removing the drive. Set jumper on pins closest the power connector. (Currently they are set in the middle selection, so there are 2 choices, going left of that position or going right depending on how you look at it. Choose the position towards the power connection.) If it is necessary to remove the drive, remove the four retaining screws from underneath the drive and slide it out to the front of the chassis.
10. Attach additional IDE cable to IDE 1 Interface on Motherboard. (This is the **white connector slot** and is labeled SEC IDE)
11. Attach the IDE 0 Interface cable to both DISK Drives. Use the Middle connector to connect to the additional Disk (Top Left Slot) and the end connector to connect to Original Disk (Top Middle Slot).
12. Attach the IDE 1 Interface cable to the DVD-ROM drive. Use the End connector of cable to connect to the DVD-ROM Drive.
13. Attach Power Cables to both Disk drives and the DVD-ROM drive.
14. Reinstall the top cover panel.
15. Attach the Power cable to the MAS.

### D. RECOGNIZING THE NEW SECOND IDE DISK: in a Window 2003 Server:

1. Open a Windows Explorer window and verify that the second disk is shown. It should be labeled D: and the CD-ROM (DVD-ROM DRIVE) will now be labeled E:
2. If not:
3. Start -> Programs -> Administrative Tools -> Computer Management
4. Click on **Disk Management** - Initialize and Convert Disk Wizard opens up. (It may ask to add the disk to the configuration – if it does, select YES).
5. Select **Next**
6. Click on “**Write Signature and upgrade Disk Wizard**”, select **Next**.
7. Select **Disk 1** and click **Next**
8. Select **Disk 1** to “Convert to dynamic disk” and click **Next**.
9. When “You have successfully completed the Write Signature and Upgrade disk wizard” is displayed, click **Finish**.
10. Then right click on the CDROM, select “**Change Letter of Drive and Path**”
11. Select the **Edit** button, then “**Assign a Drive Letter**” to E:
12. Click **OK** to close, then **exit** to close window. (To see the new E: drive letter assigned – chose Action and Refresh)
13. Now Select **Disk 1**. it will be in this status:” **Dynamic Online Unallocated**”
14. Right Click, and select “**New Volume**”
15. The Create Volume Wizard starts, Click **Next**.
16. Volume type: Select **Simple volume**, Click **Next**
17. Disk 1 Selected under Selected Dynamic Disks , Click **Next**
18. Assign Letter **D:** to the drive, Click **Next**.
19. Format Volume: Select Format this volume as Follows:
20. File system Type: **NTFS**
21. Allocated Unit Size: **Default**
22. Remove the Volume Label
23. Select “Perform a Quick Format”, then Click **Next**
24. Click **Finish**.

You should now see Disk drives D: and C: now, with the CDROM as drive E:  
Exit or Close your open windows.

## E. RUNNING THE GHOST VERSION 2003 SOFTWARE:

\*\*\*\*\*WARNING\*\*\*\*\*

**RUNNING THIS SOFTWARE WILL REBOOT THE SYSTEM!!**

\*\*\*\*\*WARNING\*\*\*\*\*

1. Start -> Programs -> Norton Ghost 2003 -> Norton Ghost
2. Select the **G**host **A**dvanced on the left hand side menu.
3. Select the **C**lone option.
4. The Clone Wizard starts.
5. Select the **N**ext button.
6. Select Disk 1 under the **S**ource: window.
7. Select Disk 2 under the **D**estination: window.
8. Select the **N**ext Button.
9. You will get a window displaying: "You have chosen to copy over a dynamic disk. The resulting disk will not be dynamic and may break an existing dynamic disk set". Click **OK**.
10. You will get a window displaying: "Add Ghost disk identification". Click **OK**.
11. You will get a window displaying: "USB device information will be displayed". Click **OK**.
12. Select the **N**ext Button in the **A**dvanced settings window.
13. Select the **N**ext Button in the **I**mportant **I**nformation window.
14. Select the **R**un **N**ow Button in the **N**orton **G**host **t**ask **s**ummary window.
15. You will get a Warning Pop-up Window from Norton Ghost specifying:  
"Norton Ghost is about to run a task that will restart your computer."  
"Save your data and close all open applications before clicking OK."
16. Click **OK** to continue. (This is your last chance to Cancel.)
17. You will get a Warning Pop-up Window from Norton Ghost specifying:  
"Norton Ghost is preparing to restart your computer"
18. The System reboots.
19. On the PC Dos 7.1 Startupmenu: Select **1. Run Norton Ghosts Dos Operation**.
20. You will now be in a Progress Indicator Screen.  
"This process takes about thirty – forty-five minutes to complete for an 80GB Disk"
21. When finished the system will reboot.
22. When the system is up, LOG IN with Administrator privileges.
23. Open a Windows Explorer window.
24. Select the **(D:)** drive and Delete the **D:\pagefile.sys** file.  
NOTE: "If permissions are blocked from seeing the pagefile.sys file  
See section on "If Permissions are Blocked"

## F. IF PERMISSIONS ARE BLOCKED:

1. Go to the **T**ools Drop Down Menu in Windows Explorer.
2. Select **F**older Options...
3. Select the **V**iew tab.
4. Under Advanced Settings:
5. Under **H**idden **F**iles and **F**olders:
6. Select:
  - **S**how **h**idden **F**iles and **F**olders.
7. Uncheck the:
  - **H**ide **F**iles **e**xtensions for **k**nown **f**ile **t**ypes
  - **H**ide **p**rotected **o**perating **s**ystem **f**iles (recommend)  
Note:" Select Yes for the warning pop-up window"
8. Select the **OK** button.

## G. REMOVING THE DUPLICATED DISK AND PLACING IT IN SAFE KEEPING:

A duplicated Ghost disk which was made as a general precaution or for Upgrade protection can be left in the system, or after it is created, it can be removed and put into safe keeping.

1. Shutdown the system.
2. Remove the Power cable from the MAS.
3. Remove the top cover panel of the MAS.
4. Remove the Power and IDE cable connections from both IDE disk drives and the DVD-ROM drive
5. Remove the duplicated disk from the top left slot.
6. Remove the duplicated disk container from the top left slot.
7. Remove the disk from the container.
8. Place the disk in the static bag and packing materials supplied with the new disk.
9. The jumpers for the original IDE DISK drive should still be set to 16 HEAD MASTER. (Jumper setting options for Avaya disks are described on a label which is situated just above the jumpers on the rear of the disk.)
10. Set the jumper on the DVD-ROM to SLAVE.
11. Reinstall the empty disk container.
12. Attach the IDE 0 Interface cable to the original disk and the DVD-ROM Drive. Use the Middle connector to connect to the original disk and the end connector to connect to the DVD-ROM.
13. Remove the IDE 1 Interface cable.
14. Attach the Power Cables to the Original disk drive and the DVD-ROM drive
15. Attach the power cable to the MAS.
16. Log into the MSS System and re-enter the Domain Controller Administration Password under "Basic System Administration"/"TCP/IP Administration"/ Windows Domain Setup". Click on **Save**.

## H. USING THE DUPLICATED GHOST DISK:

If the duplicated disk was left in the system, it will be next to the original disk, it will be set as the slave disk on the IDE 0 controller and the DVD-ROM drive will be the primary device on the IDE 1 controller.

1. Shutdown the system.
2. Remove the Power cable from the MAS.
3. Remove the top cover panel of the MAS.
4. Remove the Power and IDE cable connections from both IDE disk drives and the DVD-ROM drive
5. Remove the original disk container from the top right slot
6. Remove the disk from the disk container and dispose of the disk
7. Remove the duplicate disk container from the top left slot.
8. Change the jumper setting from 16 HEAD SLAVE to 16 HEAD MASTER. (Jumper setting options for Avaya disks are described on a label which is situated just above the jumpers on the rear of the disk.)
9. Insert the disk container into the top right slot.
10. Insert the now empty container into the top left slot.
11. Set the jumper on the DVD-ROM to SLAVE.
12. Attach the IDE 0 Interface cable to the duplicated disk and the DVD-ROM Drives. Use the Middle connector to connect to the duplicated disk and the end connector to connect to the DVD-ROM.
13. Remove the IDE 1 Interface cable.
14. Attach the Power Cables to the duplicated disk drive and the DVD-ROM drive
15. Attach the Power cable to the MAS UP.
16. Log into the MSS System and re-enter the Domain Controller Administration Password under "Basic System Administration"/"TCP/IP Administration"/ Windows Domain Setup". Click on **Save**.

If the duplicated disk was removed from the system and placed in safe keeping:

1. Shutdown the system.
2. Remove Power cable.
3. Remove top cover panel of the MAS.
4. Remove Power and IDE cables connections from the IDE disk drive and the DVD-ROM drive
5. Remove the failed disk from top right disk container.
6. Remove the disk from the container.
7. Dispose of the failed disk

8. Remove the top left disk container.
9. Remove the plastic insert from the container (if present).
10. Attach the Top Left disk container to the duplicated 80GB IDE DISK. **NOTE:** Only use the Flat Head Screws or you will not be able to slide the disk container back into the slot to lock in.
11. Set the jumpers for the duplicated IDE DISK drive to 16 HEAD MASTER. (Jumper setting options for Avaya disks are described on a label which is situated just above the jumpers on the rear of the disk.)
12. Install the duplicated IDE DISK in the open Top right Slot.
13. Install the empty container in the top left slot.
14. Set the jumper on the DVD-ROM to SLAVE.
15. Attach the IDE 0 Interface cable to the duplicated disk and the DVD-ROM Drives. Use the Middle connector to connect to the duplicated disk and the end connector to connect to the DVD-ROM.
16. Attach Power Cables to the duplicated disk drive and the DVD-ROM drive
17. Power the System UP.
18. Log into the MSS System and re-enter the Domain Controller Administration Password under “Basic System Administration”/“TCP/IP Administration”/ Windows Domain Setup”. Click on **Save**.

**Workaround or alternative remediation**

**Remarks**

This procedure is only intended for use with Avaya disks of the same make, model, size and geometry. The disk to be used as a duplicate should be previously unused.

This procedure should only be performed by an authorized Avaya Technician.

This procedure is only intended for use on an R3 system.

This procedure does not apply for upgrade protection when migrating from a pre release 3.0 system to a release 3.0 system.

Each MAS system in a multi MAS cluster must have its own individual duplicated disk and licensed copy of the Ghost 9.0 software.

**Patch Notes**

The information in this section concerns the patch, if any, recommended in the Resolution above.

|   |                              |
|---|------------------------------|
| <b>Backup before applying the patch</b> |                              |
| n/a                                     |                              |
| <b>Download</b>                         |                              |
| n/a                                     |                              |
| <b>Patch install instructions</b>       | <b>Service-interrupting?</b> |
| n/a                                     | No                           |
| <b>Verification</b>                     |                              |
| n/a                                     |                              |
| <b>Failure</b>                          |                              |
| n/a                                     |                              |
| <b>Patch uninstall instructions</b>     |                              |
| n/a                                     |                              |

**Security Notes**

The information in this section concerns the security risk, if any, represented by the topic of this PSN.

|  |  |
|--|--|
| <b>Security risks</b>                              |  |
| n/a  |  |
| <b>Avaya Security Vulnerability Classification</b> |  |
| Not Susceptible                                    |  |
| <b>Mitigation</b>                                  |  |
| n/a  |  |

**For additional support, contact your Authorized Service Provider. Depending on your coverage entitlements, additional support may incur charges. Support is provided per your warranty or service contract terms unless otherwise specified.**

| Avaya Support Contact  | Telephone                        |
|--|----------------------------------|
| U.S. Remote Technical Services – Enterprise                              | 800-242-2121                     |
| U.S. Remote Technical Services – Small Medium Enterprise                 | 800-628-2888                     |
| U.S. Remote Technical Services – BusinessPartners for Enterprise Product | 877-295-0099                     |
| BusinessPartners for Small Medium Product                                | Please contact your distributor. |
| Canada   | 800-387-4268                     |
| Caribbean and Latin America  | 786-331-0860                     |
| Europe, Middle East, and Africa  | 36-1238-8334                     |
| Asia Pacific   | 65-6872-8686                     |

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