

Chapter 4 – Using the Entry-Master Disk Utilities

Now that you have learned how to setup and maintain the **Entry-Master** System, you need to learn how to **backup** and **restore** your important database files. Making a backup of your database files ensures minimum time will be lost if something happens to the data on your **Entry-Master** panel's hard disk drive.

This lesson will demonstrate how to perform the following functions:

- [Complete System Backup](#)
- [Complete Data Backup](#)
- [Show System Disk Status](#)
- [Restoring A System Backup](#)

To begin, access the **Entry-Master Utilities Menu**, by clicking on **Option 3** from the **Main Menu**:

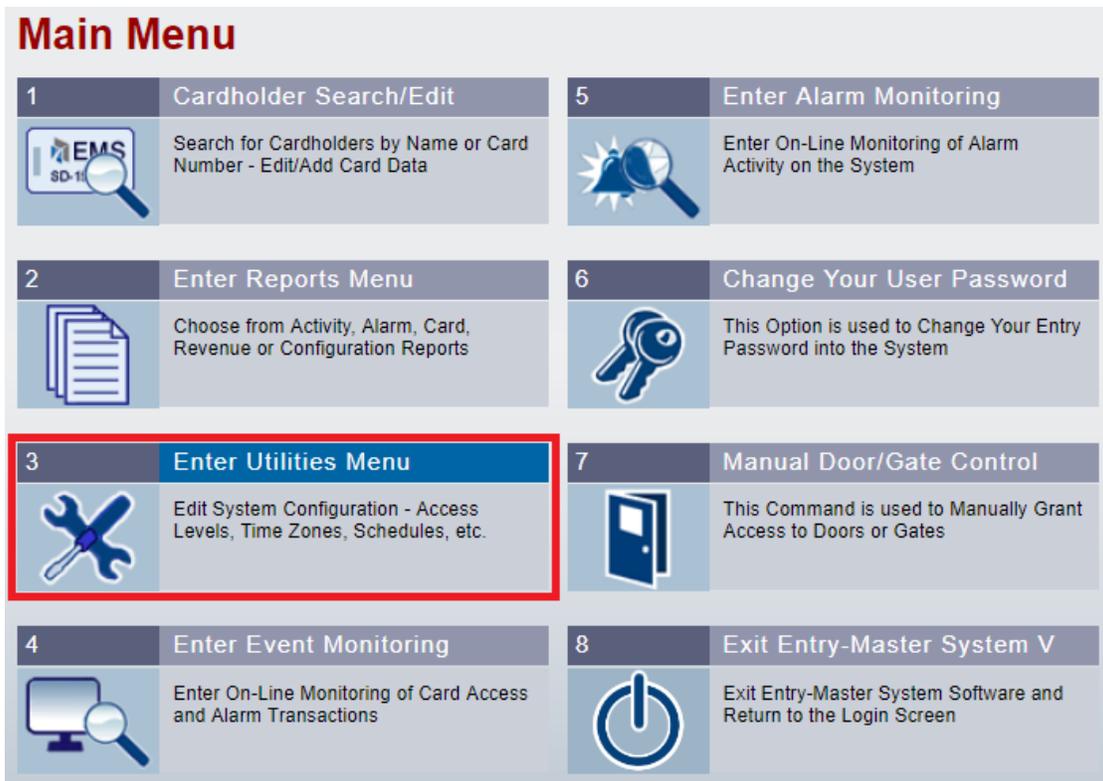


Figure 4-1. Selecting the Utilities Menu from the Main Menu

IMPORTANT NOTE:

The **Complete System Backup** need only be performed **one time**, when the system is initially commissioned, or if software updates are performed. Otherwise, a **Complete Data Backup** is sufficient to perform, since it take *significantly less time* to perform, is smaller in size, and contains everything necessary to restore a functioning system to proper operation, in the event of a data restore situation. The next section will cover **Complete Data Backups**.

From the *Utilities Menu*, click on **Option 15 – Disk Utilities Menu** (Figure 4-2 below):

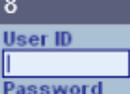
Utilities Menu	
<p>1</p>  <p>Edit EMRI-2 Reader Data</p> <p>Edit/Add Card Reader Configurations for Emri-2 Reader Interface Boards</p>	<p>9</p>  <p>Batch Update Cardholders</p> <p>This Option Batch Updates (Adds or Edits) Card Numbers with a Template</p>
<p>2</p>  <p>System Devices Menu</p> <p>Used to Add, Edit and Configure New Devices on the System</p>	<p>10</p>  <p>Forgive ALL Cardholders</p> <p>Change All Cards to Forgive Status (Cards get One Free Access In/Out)</p>
<p>3</p>  <p>Edit Time Zone Database</p> <p>Define Time Zone Information (Who is Allowed in When)</p>	<p>11</p>  <p>Elevator Control Database</p> <p>Use this to Edit/Add Elevator Group Access (What Floors are Allowed)</p>
<p>4</p>  <p>Edit Access Group File</p> <p>Define Access Group Information (Who is Allowed in Where, Nesting)</p>	<p>12</p>  <p>Scheduled Event Menu</p> <p>This Menu is Used to Define Events and Enter them into the Scheduler</p>
<p>5</p>  <p>Edit Access Messages File</p> <p>Edit Access Activity Messages (the Messages that Print out On-line)</p>	<p>13</p>  <p>Re-Index Cardholder File</p> <p>This is Used to Clean-Up the Card Database File (to Re-Alphabetize)</p>
<p>6</p>  <p>Edit System Holiday File</p> <p>This Option Adds and/or Edits all Scheduled Holidays</p>	<p>14</p>  <p>Device Diagnostics Menu</p> <p>Setup System Devices & Controllers, Test Communication, Readers & Locks</p>
<p>7</p>  <p>Monitor Display Menu</p> <p>Menu Used to Edit the Display Attributes and Camera Settings</p>	<p>15</p>  <p>Disk Utilities Menu</p> <p>Disk Formatting, Backup & Restore, Disk & Diskette Diagnostics</p>
<p>8</p>  <p>System User Maintenance</p> <p>This Option is Used to Add, Edit or Delete System Users (Passwords)</p>	<p>16</p>  <p>Return To Main Menu</p> <p>Exit the Utilities Menu back to the Entry-Master Main Menu</p>

Figure 4-2. Selecting Disk Utilities Menu from the Utilities Menu

Complete System Backup

A *Complete System Backup* involves saving the entire contents of the system, including the operating system, application software and data files. This type of backup would be necessary to be available if the Entry-Master panel's hard disk drive were to fail, or some other catastrophic event were to leave the system unable to operate.

To perform a **Complete System Backup**, click on **Option 1 – Complete System Backup** from the *Disk Utilities Menu* (see **Figure 4-3** below):

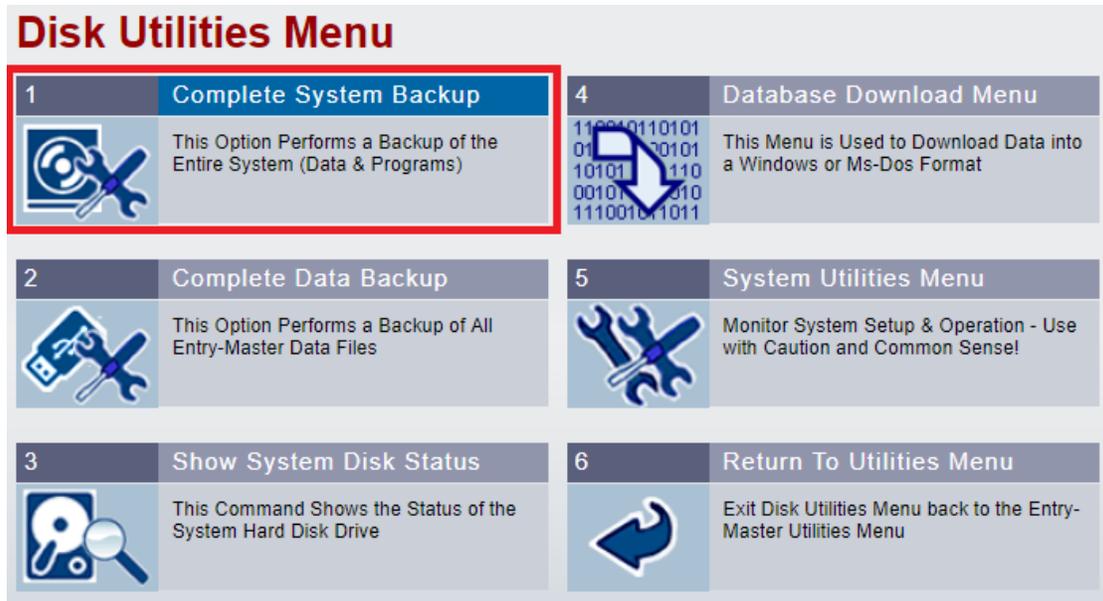


Figure 4-3. Selecting Complete System Backup from Disk Utilities Menu

After clicking **Option 1**, the *Complete System Backup* confirmation screen will display. To start the backup, click the “**Yes**” button (see **Figure 4-4** below):

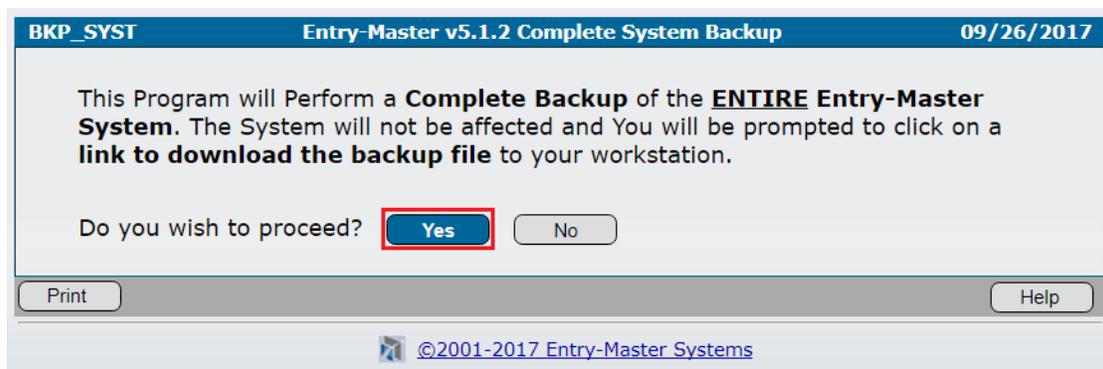


Figure 4-4. Complete System Backup Confirmation Screen

Once the “**Yes**” button is clicked, the backup will begin (see **Figure 4-5** below):

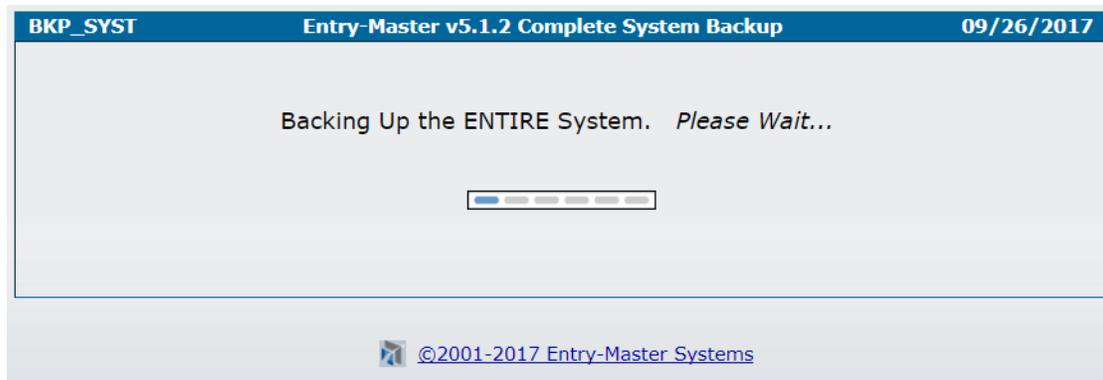


Figure 4-5. Complete System Backup In-Progress

Once the backup is completed, the following screen will display (see **Figure 4-6** below):

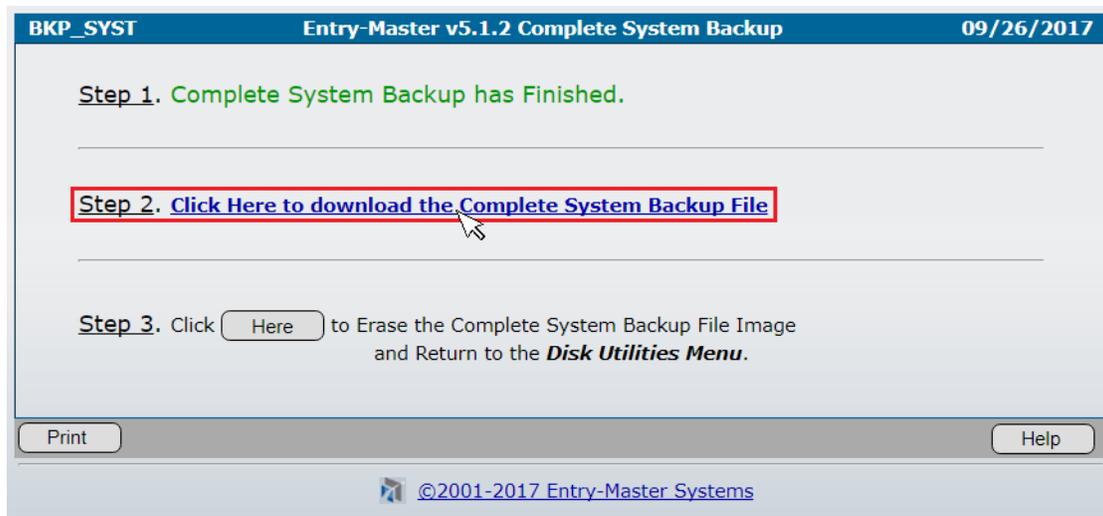


Figure 4-6. Complete System Backup Completed – Ready to Download

At this point, the **backup file** exists only on the **Entry-Master** system. There is usually no issue with the backup file remaining on the system; but, the purpose of a **backup** is to be able to access the file if the system suffers a catastrophic event.

So, you will want to **download** this file to the workstation that you are presently using. Click on the **Step 2. [Click Here to download the Complete System Backup File](#)** hyperlink to begin the process of downloading the backup file to your computer (see **Figure 4-6** above).

Once you click on the hyperlink, the following message will appear at the bottom of your Internet browser (**Figure 4-7** below):



Figure 4-7. Browser Prompt – Selecting Where to Download the Backup File

As shown in **Figure 4-7** above, it is recommended that the following steps be performed:

1. Create a folder on your computer's "C:" drive, named **EMS**
2. Click the "Save as" option, as shown in **Figure 4-7** above, to save the **backup file**
3. When saving the **backup file**, do not change the **filename**
4. You can and should change the **file-type** (see **Figure 4-8** below):

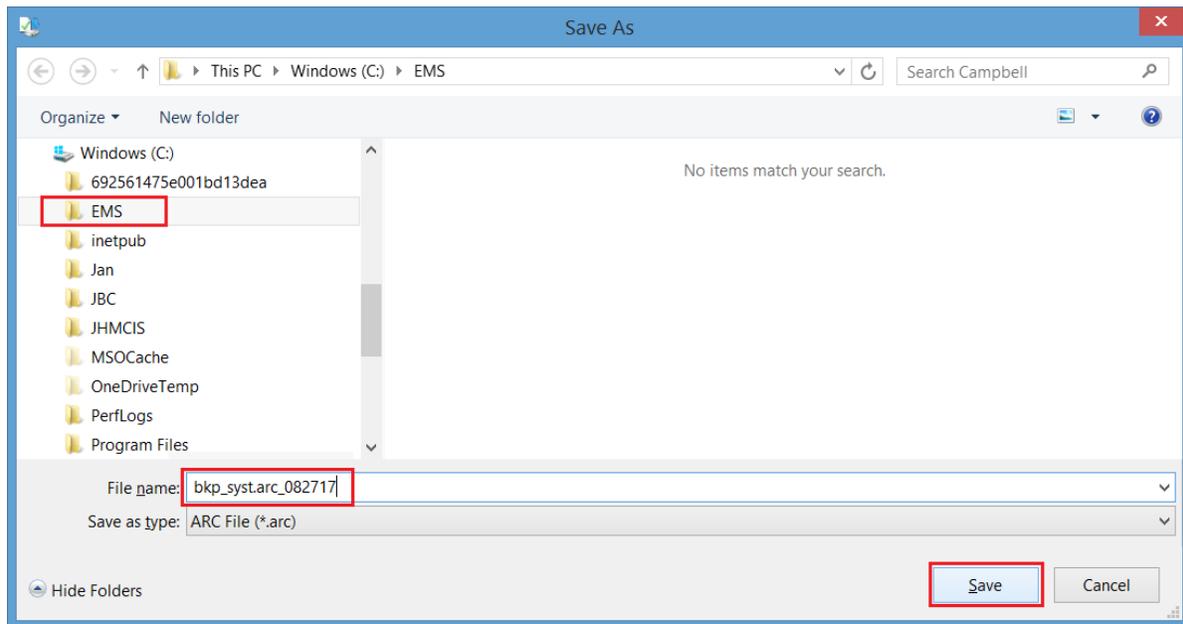


Figure 4-8. Browser Prompt – Selecting Where to Download the Backup File

The **filename** will default to **bkp_syst.arc**; if you change this filename, it is recommended that you add the date to the end – for example, in **Figure 4-8** above, the filename was saved as **bkp_syst.arc_082717**, corresponding to the date of the backup. By naming the files in this way, it will help **Entry-Master Technical Support** to help you locate your backup file.

The majority of the issues faced by Entry-Master personnel with assisting customers in restoring their backup files is that they have renamed the backup file, and do not remember where they stored it!

As long as the filename is left reasonably intact, **Entry-Master Technical Support** personnel can assist you in finding and retrieving your backup files.

Once the backup is safely stored onto your computer, you can perform **Step 3**, which deletes the backup file from the **Entry-Master** panel. *This feature is only required for **older legacy systems**, which did not have the hard disk capacity to leave the backup on the system's hard drive.*

If you have a newer system (installed after 2011), you do not need to perform this function.

Complete Data Backup

A *Complete Data Backup* involves only backing up only the data files; the entire contents of the system would be saved in a **Complete System Backup**, and would not need to be continually archived. This type of backup should be performed regularly, and only takes a short amount of time, when compared to the **Complete System Backup**.

To perform a **Complete Data Backup**, click on **Option 2 – Complete Data Backup** from the *Disk Utilities Menu* (see **Figure 4-9** below):

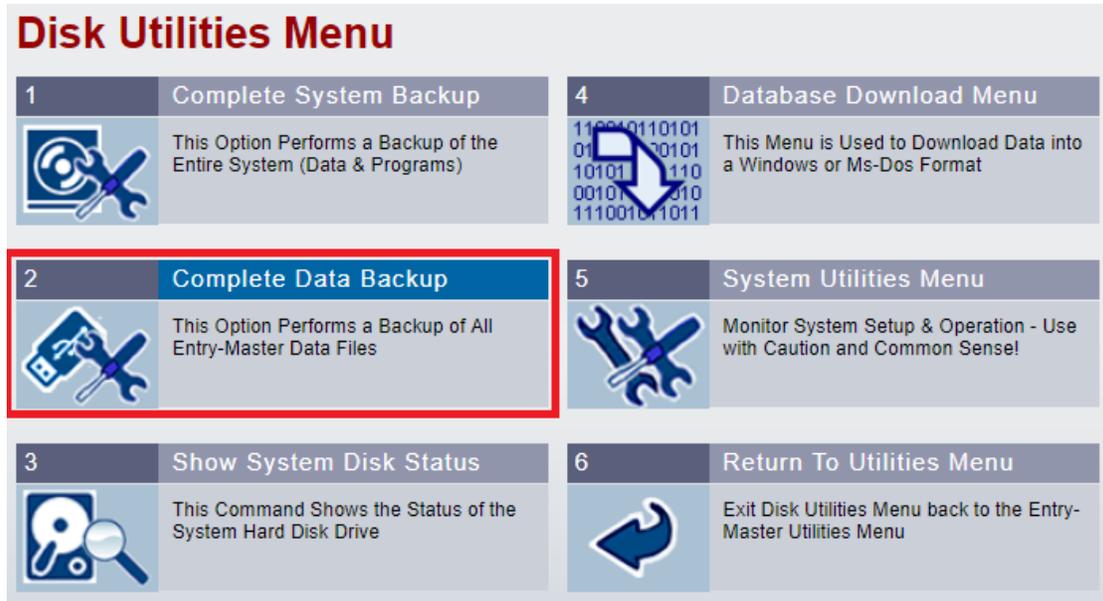


Figure 4-9. Selecting Complete Data Backup from Disk Utilities Menu

After clicking **Option 2**, the *Complete Data Backup* confirmation screen will display. To start the backup, click the “**Yes**” button (see **Figure 4-10** below):



Figure 4-10. Complete Data Backup Confirmation Screen

Once the “**Yes**” button is clicked, the backup will begin, and will function exactly like a *Complete System Backup*, with the exception that the default filename will be **bkp_all.arc**, instead of the **bkp_syst.arc** filename associated with the *Complete System Backup*.

Show System Disk Status

The purpose of showing the *System Disk Status* is to ensure that:

1. There is sufficient hard drive space available for the system to function properly; and
2. There are no disk errors or misallocations on the hard disk drive

Hard drive issues are **very rare** on Entry-Master panels; the system **regularly manages its space** and **performs self-diagnostics** on a daily basis.

Given that, it is never a bad idea to check up on the system's status.

To show the **System Disk Status**, click on **Option 3 – Show System Disk Status** from the *Disk Utilities Menu* (see **Figure 4-11** below):

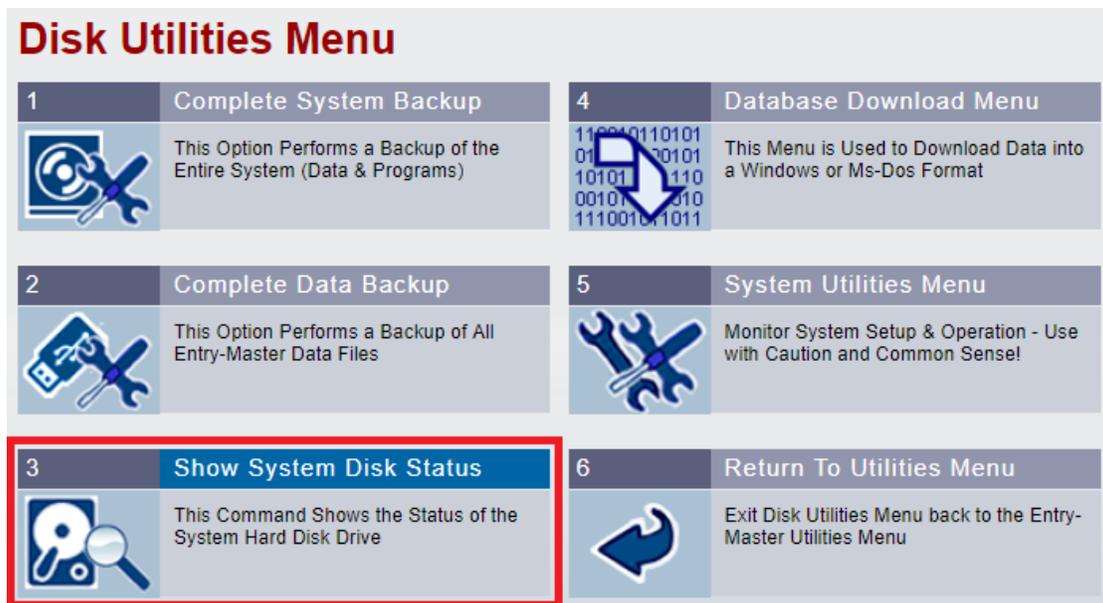


Figure 4-11. Selecting Show System Disk Status from the Disk Utilities Menu

After clicking **Option 3**, the **Performing Disk Analysis** screen will display (**Figure 4-12** below):

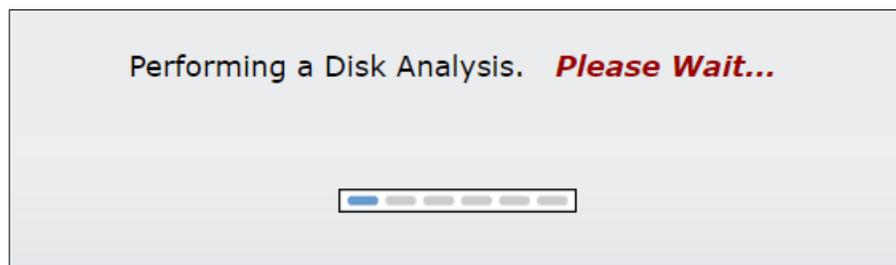


Figure 4-12. Performing a Disk Analysis

Once the analysis is complete, the *System Disk Status* screen will display (Figure 4-13 below):

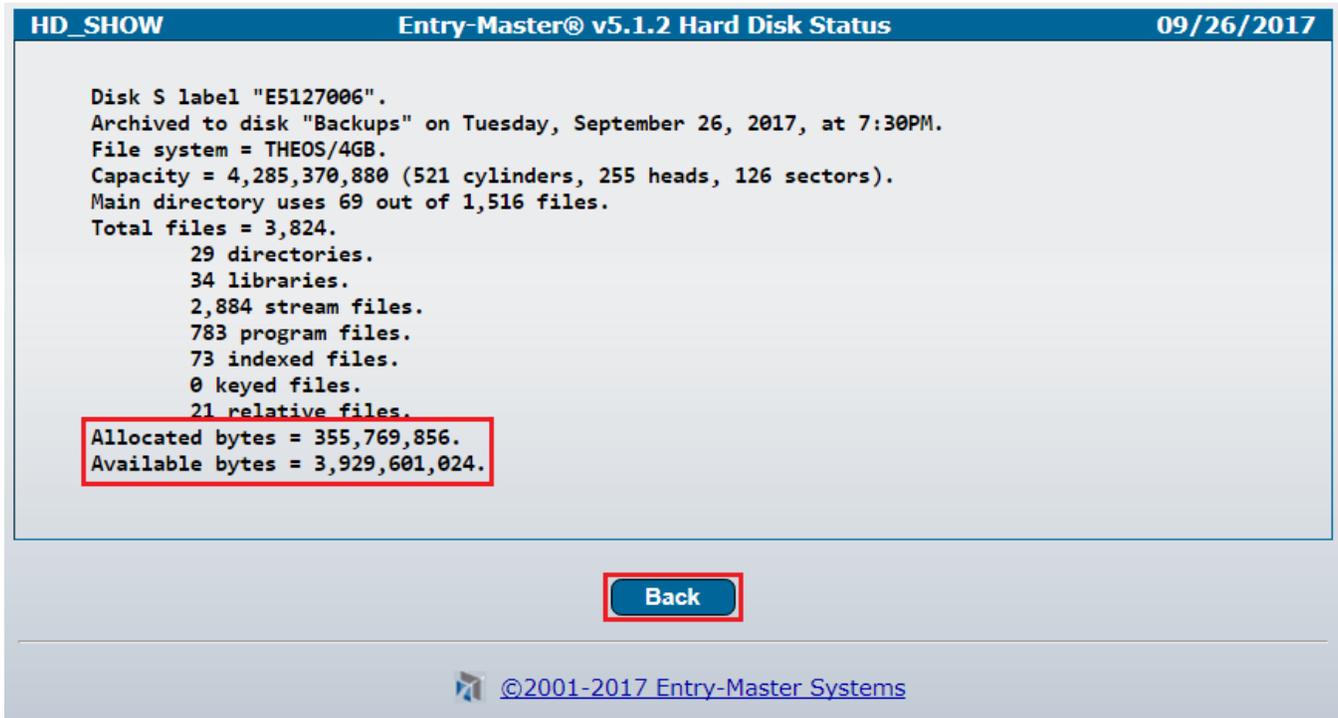


Figure 4-13. The System Hard Disk Status Screen

There are **two (2)** primary pieces of information that are of interest:

1. What is the amount of **Allocated bytes**; and
2. What is the amount of **Available bytes**

The **Available bytes** is actually the most important piece of information; but, **Entry-Master** technical support may ask you for both items, if there is an issue.

The **Available bytes** should never fall below **10,000,000** bytes (that's just under **10 Megabytes** – also written as **10MB**).

If the available system disk space falls below **10MB**, it is an indication that something is wrong, and you should contact **Entry-Master Technical Support** at **+1 443 543 6128**, or via e-mail at service@entrymaster.com.

Restoring a System Backup

On occasion, it may be necessary to restore a backup that you have made, usually due to some kind of error condition (e.g. a Batch Update that had unintended consequences, or a hardware failure has made it necessary to load your data onto a new device). Or, it could be that you are simply transferring updated data from one Entry-Master system to another.

Whatever the case may be, and regardless of what kind of backup it is (i.e. a full system or data only), the procedure for restoring a backup of any kind involves the exact same steps:

1. Start the **Entry-Master FTP server**
2. Open **Windows Explorer** to the folder that contains the backup file
3. Copy the backup file to a file named **restore.arc**
4. Open a second **Windows Explorer** window and access the **Entry-Master FTP Server**
5. Copy the **restore.arc** file from your workstation to the **Entry-Master FTP Server**
6. **Reboot** the Entry-Master panel
7. **Wait for the backup to complete** before logging in (usually 5-10 minutes, depending upon the size of the restore file)

This section will guide you through the steps of **restoring a system backup**.

Starting the Entry-Master FTP Server and Loading the Restore File

To start the Entry-Master FTP Server, your **User Privilege Level** needs to be "5" (see your System Administrator if you do have sufficient privilege to perform this function).

You will need to go to the **Utilities Menu**, as shown at the beginning of this chapter (see **Figure 4-1**). However, instead of choosing **Option 15 - Disk Utilities Menu**, you will choose **Option 14 – System Diagnostics Menu** (see **Figure 4-14** below):



Figure 4-14. Selecting Device Diagnostics Menu from the Utilities Menu

Once **Option 14** is chosen, the *Device Diagnostics Menu* will display (**Figure 4-15** below):

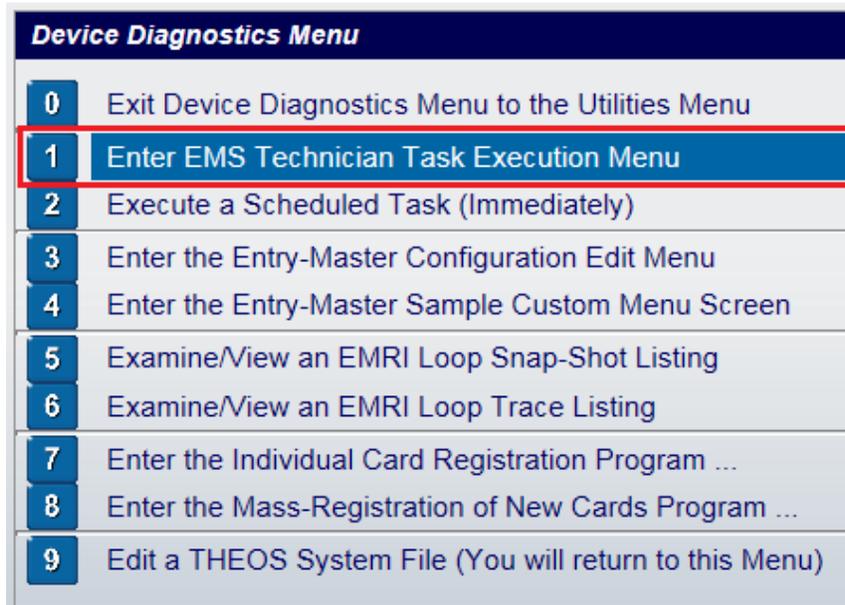


Figure 4-15. Selecting EMS Technician Task Execution Menu

Choose **Option 1 - EMS Technician Task Execution Menu** and the following menu will display (**Figure 4-16**):

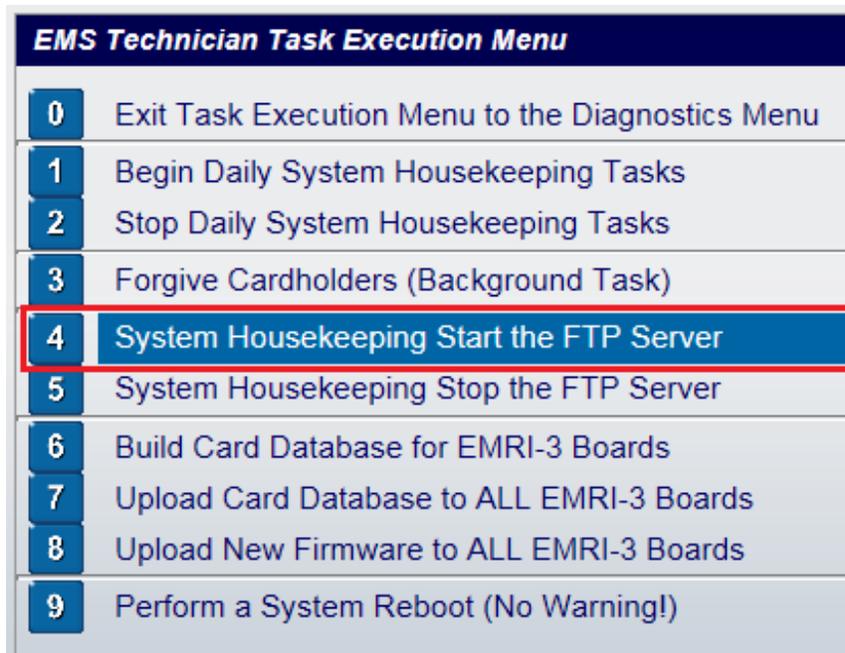


Figure 4-16. Selecting Option 4 – Start the FTP Server

Choose **Option 4 - System Housekeeping Start the FTP Server**, as in **Figure 4-16** above, and the following Dialogue box will display (**Figure 4-17** below):

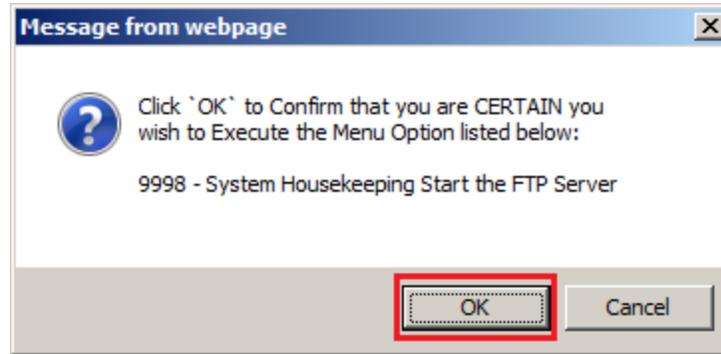


Figure 4-17. Start FTP Confirmation Pop-Up

Click "OK" and a progress screen will display for a few seconds, as the **FTP Server** is started; then, the display will return to the *EMS Technician Task Execution Menu*.

Stay on this menu screen, as you will be returning to it in the last step of the process.

Open **Windows Explorer** to the folder that contains the **backup file**.

It is recommended that you store your backups in a folder named **C:\EMS\Backups**; but, as long as you know how to find your backups when you need them, any folder will suffice.

Make a **copy of the backup file** you wish to restore and **rename** the file to **restore.arc** (see **Figure 4-18** below):

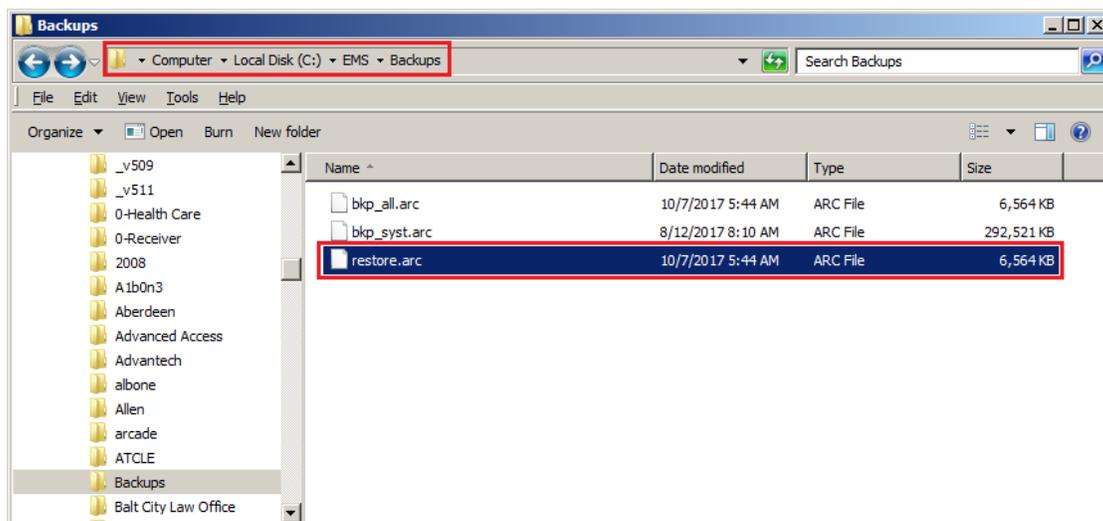


Figure 4-18. Windows Explorer with file "restore.arc"

Now, open another "instance" of **Windows Explorer**. What you are trying to do here is to have **two (2) Windows Explorer** windows opened at once. To accomplish this, **right-click** on the **Windows Explorer** icon on the **Taskbar** (also called *File Explorer* in *Windows 8* and above) and then left-click on the **Windows Explorer** selection (see **Figure 4-19** below):

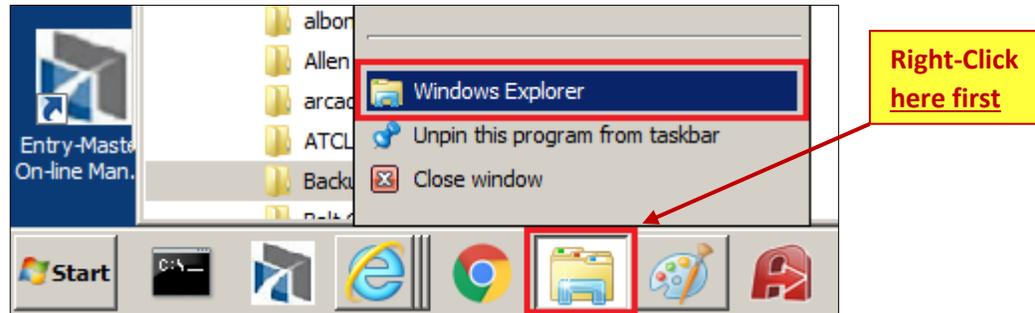


Figure 4-19. Opening another “instance” of Windows Explorer

Once you click on the **Windows Explorer** selection (as in **Figure 4-19** above) another **Windows Explorer** screen will display (see **Figure 4-20** below):

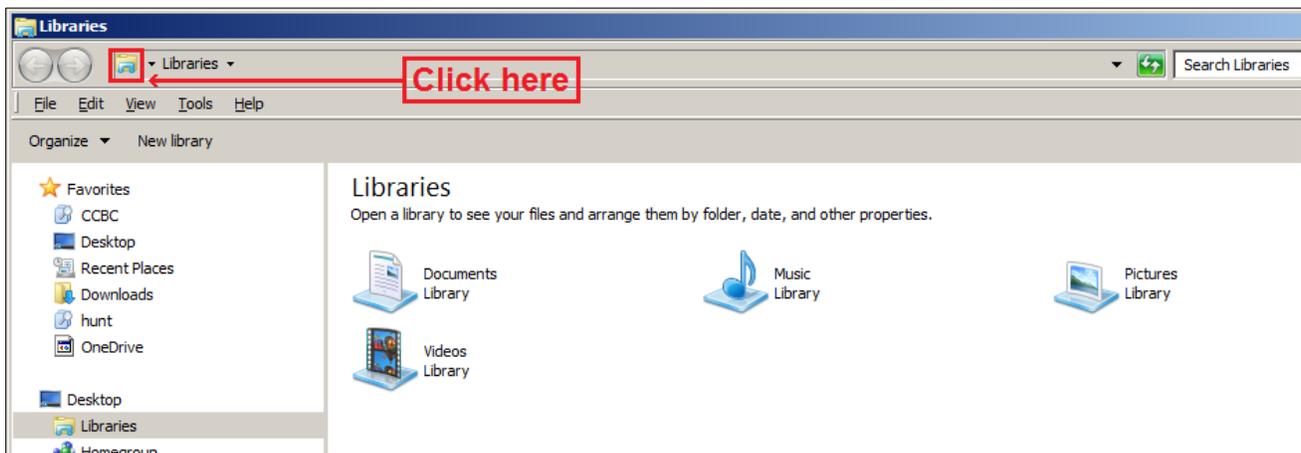


Figure 4-20. Additional “instance” of a Windows Explorer window

Once the additional Windows Explorer screen displays, click the  icon in the upper left-hand corner of the window (see **Figure 4-20** above). The filename display converts from a "pathway display" to a true "directory" display (see **Figure 4-21** below):

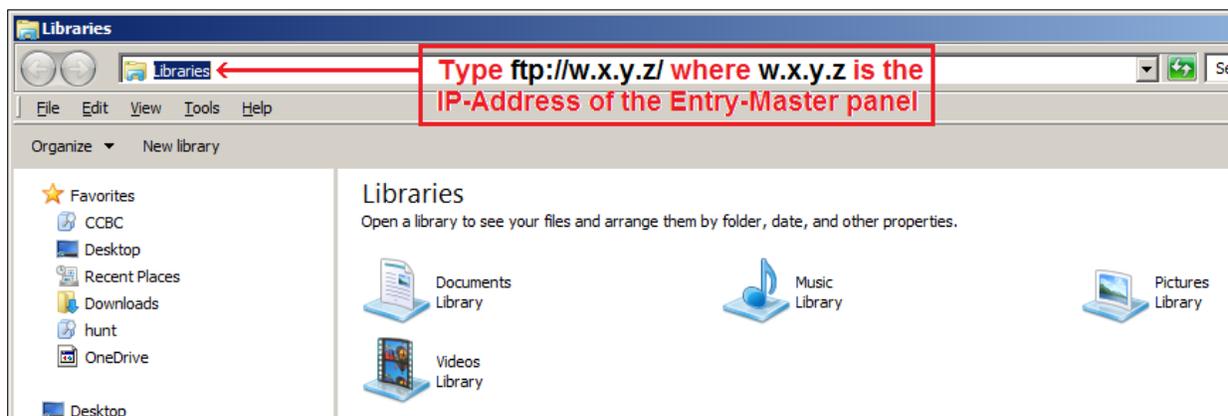


Figure 4-21. Typing the Entry-Master FTP IP-Address into Windows Explorer

Type **ftp://w.x.y.z/** in the place of the directory displayed and press the **<Enter>** key (see **Figure 4-22** below):

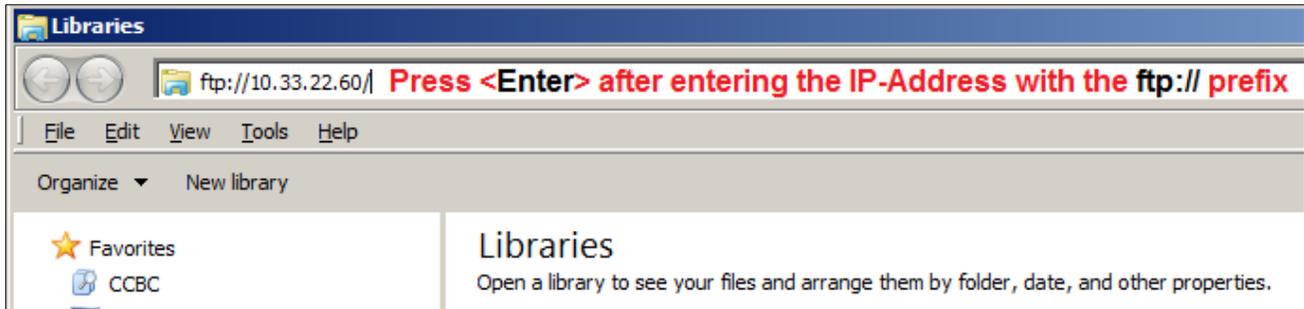


Figure 4-22. Pressing <Enter> after Typing in the Entry-Master FTP IP-Address

At this point the **Entry-Master FTP login screen** will display. In **Figure 4-23** below, IP-Address "**ftp://10.33.22.60/**" is the address used in the FTP login example:

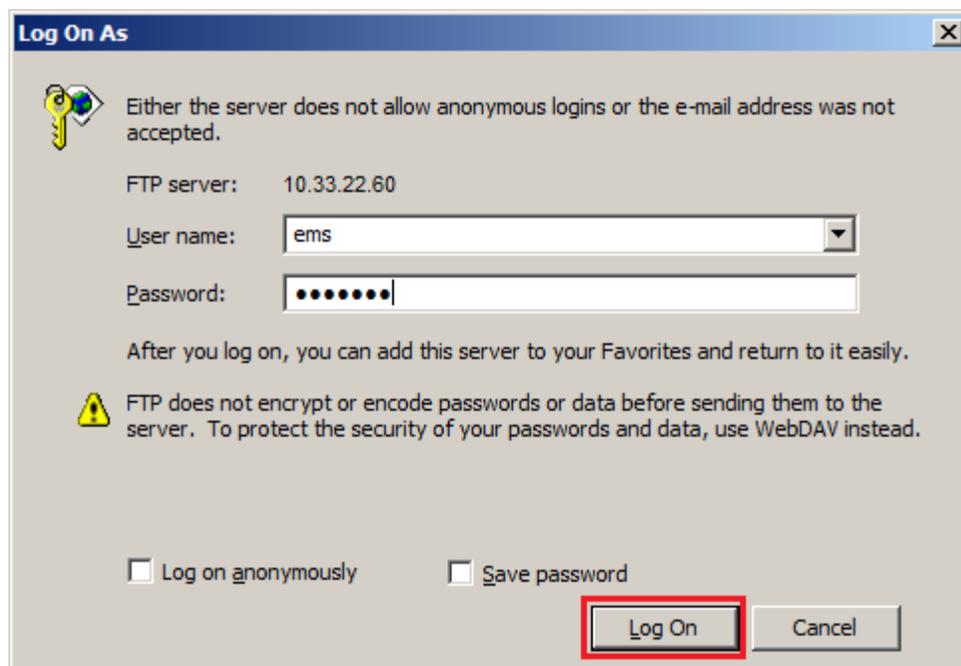


Figure 4-23. Logging in to the Entry-Master FTP Server

Type in "**ems**" as the user, and the **password** provided by your **Entry-Master Dealer**, and click the "**Log On**" button (**Figure 4-23** above).

At this point, you only need to **copy and paste** or **drag and drop** the file from your **local folder** to the **Entry-Master FTP folder** (see **Figure 4-24** below):

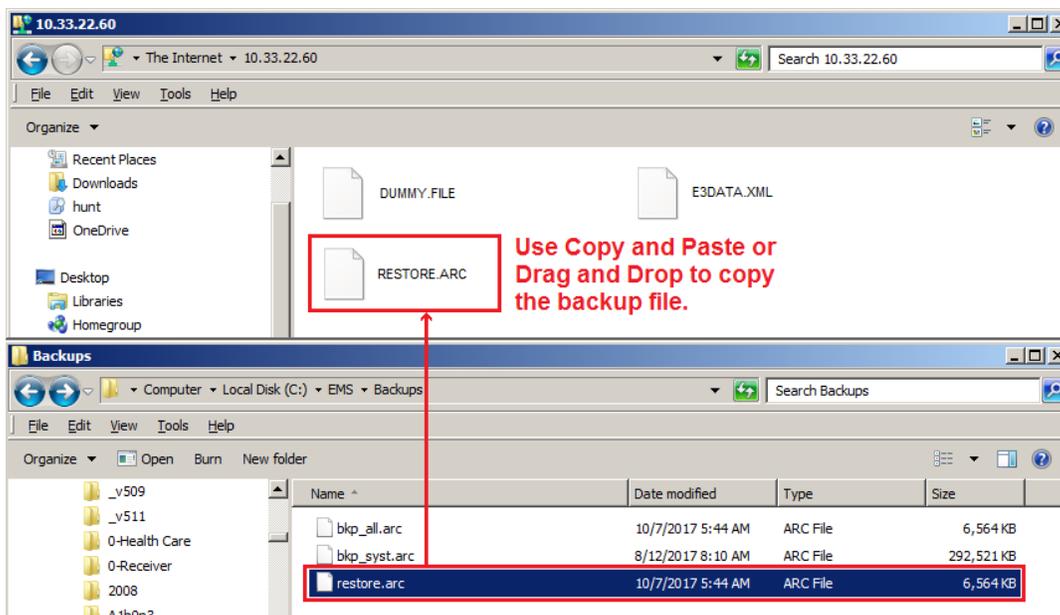


Figure 4-24. Copying the Backup File to the Entry-Master FTP Server

Once the file is copied, you will need to wait until the transfer is complete, which may take longer if it is a large file (see **Figure 4-25** below):

Once that is finished, close both of the **Windows Explorer** screens and return to the Entry-Master *EMS Technician Task Execution Menu* that you were instructed to leave open, because you would be coming back to it. **That time is now.**

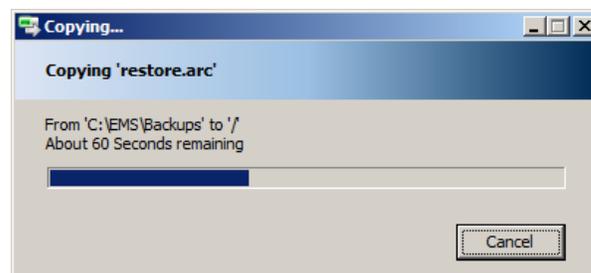


Figure 4-25. Backup File Being Copied

Click on **Option 9 - Perform a System Reboot (No Warning!)** - clicking this option will prompt you for confirmation, just like when you started the **FTP Server** earlier. Click "OK" and the screen will tell you to "*Please Wait ...*" - **this is the one and only time that you should not heed the warning on the screen.**

Once this message displays, the **Entry-Master** panel is **rebooting** and all connections are closed; so you should **close your browser and wait at least 10-15 minutes**, to allow the Entry-Master panel enough time to restore the backup and start up its services.

For complete system and large data restores, you should wait 30 minutes.

Cardholders will still continue to function normally; although if you have restored a system or data backup, the Cardholder Database should be **downloaded** to the **EMRI-3 boards** connected to the system. See **Chapter 2: Lesson 15 - Downloading Cards to EMRI-3 Boards** for more information on how to perform that function.