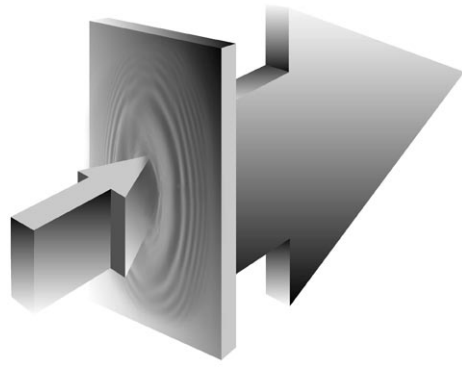


S C R I P T I N G F O R W I N D O W S N T



Scripting

This document includes the following information:

- Using Script Processing
- Command Line Options
- Script File Statements
- Script Suggestions and Notes
- Sample Scripts

Using Script Processing

You can use ServerMagic scripts to make changes to the partitions on a machine. A script is an ASCII text file with text statements that define the operations you want to perform. You can create a script file with any text editor.

Scripting for Windows NT servers is available only when you run the DOS program SMAGICT. To run SMAGICT, you must boot your server in DOS. For your convenience, SMAGICT is installed into the \Program Files\PowerQuest\ServerMagic directory. The program is also located on the root directory of the ServerMagic CD.

To execute a script, you pass the name of the script file to ServerMagic on the command line. Refer to “Command Line Options” on page 3 below for syntax examples.

Each operation in a script is performed on the partition that was last specified. You must specify the correct partition within the script.

The script text file allows comments in the C++ form (//). You can include comments on a separate line or after a valid statement.

Important Notes

SMAGICT only sees drives that DOS sees. You may need to locate DOS drivers (if available) to properly access some SCSI drives.

Adding partitions in DOS may change dynamically assigned drive letters under Windows NT. To avoid this problem, you can run ServerMagic under Windows NT first. This will statically assign all drive letters.

Partitions that are resized, copied, or moved under DOS will lose their drive letters assignments under Windows NT, even if they were statically assigned. This is due to a safety feature within Windows NT that checks all partition geometries against the registry. If any partition changed between the last time Windows NT was shut down and the current session, the partition will be dynamically assigned the next available drive letter. Once you have logged onto Windows NT, run ServerMagic and make any drive letter adjustments necessary.

If ServerMagic encounters an error when executing a script, it will terminate immediately without processing the rest of the script. You can determine if an error occurred and what error it was by viewing the log file or error file. Your script will generate log and error files if you use the /ERR and /LOG command line options.

Using ServerMagic to Configure Remote Systems

To use scripting to configure remote systems, you must be able to do the following:

- Set up remote access to your server.
- Load ServerMagic on a remote system.
- Launch ServerMagic on a remote system.
- Get feedback as necessary from a log file on the remote system.

Command Line Options

The following command line options are supported by ServerMagic.

When you specify multiple options, the order is unimportant.

All commands must be contained within one line. They cannot start on one line and finish on the next. The maximum length of a script line is 180 characters.

/CMD

This is the parameter that will be used to pass the name of the script file to the program. For example, if the script file were named **SCRIPT.TXT**, the syntax for running the program from the script would be:

```
SMAGICT /CMD=SCRIPT.TXT
```

/LOG

PowerQuest recommends that you keep a log file whenever you run ServerMagic from a script. The **/LOG** parameter is most useful when used in conjunction with the **/CMD** parameter to review what transpired during the script execution. Use the **/LOG** parameter to specify the name of a file where all output will be directed. The output will appear as if a user had been executing the program through keyboard input, displaying each script command and all that transpired because of that command.

To specify a log named **RESULTS.FIL** (with the script file specified in the **/CMD** example), the command line would be:

```
SMAGICT /CMD=SCRIPT.TXT /LOG=RESULTS.FIL
```

IMPORTANT! Do not attempt to modify the partition on which the log file is created. The log file is created on the partition from which SMAGICT is run. If you need to modify this partition, do not use the /LOG switch. If you do, you will damage your partition.

/ERR

The Error parameter is used to specify a file to be created if the program should terminate with an error.

If /ERR is specified and the program terminates without an error, the file specified will be deleted. If you use the /ERR parameter, you can write a program to just check for the existence of the error file to determine if the script was run successfully.

Even if you do not use the /ERR parameter, the error number will appear in the log file (if specified by /LOG) along with a text description of the error that occurred. To use the error parameter with the above parameters, the syntax would be:

```
SMAGICT /CMD=SCRIPT.TXT /LOG=RESULTS.FIL /ERR=ERROR.FIL
```

/NRF

The No Run File parameter is used to specify the name of a file that can prevent a script from executing. For example, you could use the /NRF parameter to check for a log file and prevent ServerMagic from running a second time if the log file existed.

If a script were run with the parameters specified above (with the /ERR option), using the syntax shown below would prevent the program from running if the RESULT.FIL existed because the program had been run once already. (Please note that the following example would need to be contained on a single line if you were to type it. It wraps here only as a result of the formatting of this user guide.)

```
SMAGICT /CMD=SCRIPT.TXT /LOG=RESULTS.FIL /ERR=ERROR.FIL  
/NRF=RESULTS.FIL
```

You can use the /NRF parameter more than once on the command line if it makes sense to check for more than one file.

/SCO

You can use the Syntax Check Only parameter to check the syntax of a script. It will ensure that a partition is always selected before an operation is executed and check the syntax of all the script commands. It will also check to ensure that any volume labels

specified in a selected partition statement are unique. It will not actually run the script. The syntax check will not detect logical errors, such as trying to move the partition when there is not space to move.

You can use this parameter with a log file (/LOG) if desired. A successful syntax check will show a statement saying that it was successful.

```
SMAGICT /CMD=SCRIPT.TXT /SCO
```

Script File Statements

Several special characters are used when describing the syntax of script file statements. These are described below. Script file statements are not case-sensitive. Before performing an operation, you must first select the drive and partition that you wish to act upon.

{ } - Denotes a required parameter

[] - Denotes an optional parameter

| - Denotes a choice among two or more options

Allow Manual Reboot

Allow the script to run even if it is determined that the program cannot reboot the machine remotely after changes are made. This should be the first statement if used.

No parameters.

Bad Sector Retest

Retest the current partition for bad sectors and unmark any bad sectors that have been set incorrectly.

Check

Check the partition for errors.

No Parameters.

Cluster Analyzer

```
[/ClusterSize={ 512 | 1 | 2 | 4 | 8 | 16 | 32 | 64 }]  
[/ShowClusterWaste]
```

[/SetToRecommended]

Get Cluster Analysis information about a particular partition.

If this operation is used without any parameters, a Cluster Analysis screen will display.

| Parameter | Description |
|-------------------|---|
| /ClusterSize | Changes the cluster size to the specified size. |
| /ShowClusterWaste | Shows the Cluster Analysis Screen. |
| /SetToRecommended | Sets the ClusterSize to the recommended size. |

Convert To FAT

Convert the FAT32 partition to FAT.

Convert To FAT32

Convert the FAT partition to FAT32.

Convert To HPFS

Convert the FAT partition to HPFS.

Copy

The Copy command should be preceded by the following commands:

- Select Drive {Num}
- Select Partition {PartitionLetter | "Volume Label" | Extended | Next | Previous | Num }
- Select Copy Drive {Num}
- Select Copy Partition {PartitionLetter | "Volume Label" | Next | Previous | Num }

For the Copy command to work correctly, you must select a drive and partition to be copied and a copy drive and partition. If the selected partition is free space and the partition specified by the copy partition is a partition smaller than the free space, this operation will copy the specified partition to the free space.

If the selected partition is a valid partition and the partition specified by the copy partition is a block of free space large enough to hold the partition, the copy operation will copy the selected partition to the specified free space.

Create /FS={FAT | FAT32 | HPFS | LinuxExt2 | LinuxSwap | NTFS | Extended | Unformatted}

```
[ /Label="NEW LABEL" ]  
[ /Size=Value ]  
[ /Position={BEGINNING | END} ]
```

Create a new partition, and, optionally, format it.

| Parameter | Description |
|-----------|--|
| /FS | (Required) It can be any of the above specified strings. There may be cases where creating with a certain /FS would fail. For example, trying to create an Extended partition when one already existed. |
| /Label | (Optional) Replace "NEW LABEL" with the desired volume label. It must be 11 characters or less for FAT partitions. Labels must be 16 characters or less for Linux Ext2 partitions and 32 characters or less for NTFS partitions. The label must be in double quotes. The script may fail if invalid characters are entered. |
| /Size | (Optional) Specified in megabytes and will default to the size of the free space if not specified. |
| /Position | (Optional) Must be followed by either END or BEGINNING to specify where the partition will be created in the free space. |

Delete {Volume Name | "NO NAME" | "LINUXSWAP" | "UNKNOWN" }

Delete a partition.

| Parameter | Description |
|-------------|--|
| Volume Name | Required to delete a partition UNLESS the partition is either an extended partition, Linux swap partition, or an unformatted partition. This is a check to ensure that you are destroying data in the proper partition only. The value entered must always be preceded and followed by double quotes. If the partition label is blank and the partition is FAT or HPFS, you should type "NO NAME" as the label. If the partition is not FAT or HPFS, then you should type "UNKNOWN." |

Format {Volume Name | "NO NAME" | "UNKNOWN" }

```
/FS={ FAT | FAT32 | HPFS | LINUXEXT2 | LINUXSWAP | NTFS }  
[ /Label="NEW LABEL" ]
```

Format a partition.

| Parameter | Description |
|-------------|---|
| Volume Name | Required to format a partition UNLESS the partition is either an extended partition or an unformatted partition. This is a check to ensure that you are destroying data in the proper partition only. The value entered must always be preceded and followed by double quotes. If the partition label is blank and the partition is FAT or HPFS, enter "NO NAME" as the label. If the partition is not FAT or HPFS, enter "UNKNOWN" as the label. |
| /FS | (Required) Can be any of the above specified strings. There may be cases where formatting with a certain /FS would fail, for example trying to format a FAT partition past 1024 cylinders. |
| /Label | (Optional) Replace "NEW LABEL" with the desired volume label. It must be 11 characters or less for FAT partitions. Labels must be 16 characters or less for Linux Ext2 partitions and 32 characters or less for NTFS partitions. The label must be in double quotes. The script may fail if you enter invalid characters. |

Hide

Hide the currently selected partition.

Info

```
[ /Usage ]  
[ /Waste ]  
[ /Partition ]  
[ /FS ] -----> { FAT | FAT32 | HPFS | NTFS }
```


Get Info about a particular partition.

| Parameter | Description |
|------------|--|
| /Usage | <p>Disk Usage is available for the FAT, FAT32, NTFS, and HPFS file systems.</p> <p>This parameter shows you the following information in bytes, megabytes, and as a percentage:</p> <ul style="list-style-type: none">• Used space on the partition, including space wasted by clusters• Free space on the partition• Bad space on the partition• Total space on the partition (found by adding the three previous lines) |
| /Waste | <p>Cluster Waste applies only to partitions that use either the FAT or FAT32 file system. This parameter shows the following:</p> <ul style="list-style-type: none">• Current cluster size in bytes or kilobytes• Data stored on the partition in bytes and megabytes• Wasted space on the partition in bytes and megabytes <p>Total Used space in bytes and megabytes (determined by adding the numbers on the two previous lines)</p> |
| /Partition | <p>This applies to all types of partitions, including free space and extended partitions. Information from this parameter includes the following:</p> <ul style="list-style-type: none">• Partition type is shown in hexadecimal followed by a text description of the partition or file system type (such as FAT, FAT32, NTFS, HPFS, and so on). The hexadecimal designation is a conventional way to display partition types.• Serial number is shown here if the partition's file system uses serial numbers. Not all file systems use serial numbers. |

| Parameter | Description |
|-----------|--|
| | <p>This parameter also shows physical information about the partition, including the following:</p> <ul style="list-style-type: none"> • First Physical Sector shows the logical number and the location (cylinder, head, and sector) where the partition begins. • Last Physical Sector shows the logical number and the location (cylinder, head, and sector) where the partition ends. • Total Physical Sectors gives the number of sectors in the partition. • Physical Geometry shows the number of cylinders, heads, and sectors of the physical disk drive on which the partition resides. • Boot Manager Name shows the volume name as it appears in the Boot Manager menu, if you are running Boot Manager. If the partition is the Boot manager default selection, "Current Default" will be shown in parentheses. |
| /FS FAT | <p>This parameter applies only to partitions that use the FAT or FAT32 file system. The first section provides the following information about the file system:</p> <ul style="list-style-type: none"> • Sectors per FAT • Root directory capacity • First FAT sector • First data sector <p>The next section gives the following information:</p> <ul style="list-style-type: none"> • Number of bytes in files on the partition, the number of files, and the number of those files that are hidden • Number of bytes in directories on the partition, the number of directories, and the number of those directories that are hidden <p>The final section gives the following information about extensions to the FAT file system:</p> <ul style="list-style-type: none"> • Number of bytes used for OS/2 Extended Attributes; how many files and directories the Extended Attributes are associated with • Number of bytes used for long filenames; number of files and directories the long filenames are associated with |

| Parameter | Description |
|-----------|---|
| /FS NTFS | <p>This parameter shows the following file system information for the selected NTFS partition:</p> <ul style="list-style-type: none"> • NTFS Version shows the version number. The most recent version is 1.3. • Bytes per NTFS sector displays the number of bytes in each logical sector on the selected partition. (There are always 512 bytes in each physical sector.) • Cluster size • First MFT Cluster • File Record Size <p>The next section shows information similar to that shown by NTFS CHKDSK, including the following:</p> <ul style="list-style-type: none"> • Number of files and the bytes and clusters allocated to them • Of the clusters used in files, the number of wasted bytes resulting from the cluster size • Number in indexes (directories) and the space allocated to them, shown in bytes and clusters • Space reserved for other system structures, shown in both bytes and clusters |
| /FS HPFS | <p>This parameter applies only to partitions that use the HPFS file system. The first section provides the following information about the file system:</p> <ul style="list-style-type: none"> • Partition status (Is the partition active?) • DirBlock sectors • Free DirBlocks • Hot Fixes Used |

| Parameter | Description |
|-----------|--|
| | The next section gives the following information: |
| | <ul style="list-style-type: none"> • Number of bytes in files on the partition, the number of files, and the equivalent amount of sectors • Number of bytes unused in file sectors • Number of bytes in directories on the partition, the number of directories, and the equivalent number of sectors • Number of bytes in file/dir Fnodes and equivalent sectors • Number of bytes reserved by system and equivalent sectors • Number of bytes in extended attributes |

Label

```
[ /GetLabel ]
[ /SetLabel=" " ]
```

This option allows you to change a partition's volume label. Labels are shown in all uppercase letters.

The maximum number of alphanumeric characters, and the types of characters permitted depends upon partition type.

| Partition Type | Maximum Number of Alphanumeric Characters | Invalid Characters |
|--------------------|---|--------------------|
| FAT16, FAT32, HPFS | 11 | *?[<> +=:;,.\ /" |
| NTFS | 32 | None |
| Linux Ext2 | 16 | None |

Move Left {Max | Min | Value }

Move a partition to the left. If the partition is the extended partition, only the right boundary is changed.

| Parameter | Description |
|-----------|---|
| Max | Move the partition as far to the left as possible. Flush with the previous partition or beginning of the drive. |
| Min | Move the partition to the left, the minimum amount possible (1 cylinder) |
| Value | Move the partition left by the amount of the value specified (in megabytes) |

Move Right {Max | Min | Value }

Move a partition to the right. If the partition is the extended partition, only the right boundary is changed.

| Parameter | Description |
|-----------|--|
| Max | Move the partition as far to the right as possible. Flush with the next partition or end of the drive. |
| Min | Move the partition to the right the minimum amount possible (1 cylinder) |
| Value | Move the partition right by the amount of the value specified (in megabytes) |

Move Space Before {Max | Value }

Same as Move Right.

| Parameter | Description |
|-----------|---|
| Max | Same as Move Right Max. Makes as much space before the partition as possible by moving the partition right. |
| Value | Moves the partition right such that the space before is equal to the value specified, if possible (specified in megabytes). |

Move Space After {Max | Value }

Same as Move Left.

| Parameter | Description |
|-----------|---|
| Max | Same as Move Left Max. Makes as much space before the partition as possible by moving the partition right. |
| Value | Moves the partition left such that the space before is equal to the value specified if possible (specified in megabytes). |

Resize {Max | Min | Value } [/Clustersize={512 | 1 | 2 | 4 | 8 | 16 | 32 | 64}]

Resize a partition.

| Parameter | Description |
|--------------|---|
| Max | Resizes to the maximum size possible (Right edge will be flush with end of drive or next partition if possible) |
| Min | Resizes to the minimum possible (determined by the size of the data) |
| Value | Resize to value specified (in megabytes) |
| /Clustersize | Will set the cluster size to the size specified during the resize operation. (The cluster size must be valid for the partition size specified.) |

Resize Larger {Max | Min | Value} [/Clustersize={512 | 1 | 2 | 4 | 8 | 16 | 32 | 64 }]

Resize a partition larger by specifying the incremental change in size.

| Parameter | Description |
|--------------|---|
| Max | Same as Resize Max. Partition as big as possible |
| Min | Grows the size of the partition by the smallest amount possible (1 cylinder) |
| Value | Grows the size of the partition by the size specified (in Megabytes) |
| /Clustersize | Sets the cluster size to the size specified during the resize operation. (The cluster size must be valid for the partition size specified.) |

Resize Left Boundary {Max | Min | Value }

Resize the extended partition by moving the left boundary. This operation is for extended partitions only. .

| Parameter | Description |
|------------------|---|
| Max | Resizes to the maximum size possible (Right edge will be flush with end of drive or next partition if possible) |
| Min | Resizes to the minimum possible (determined by the size of the data) |
| Value | Resize to value specified (in megabytes) |

Resize Left Boundary Larger {Max | Min | Value }

Resize an extended partition larger by specifying the change in position of the left boundary. This operation is for extended partitions only.

| Parameter | Description |
|------------------|---|
| Max | Same as Resize Left Boundary Max. Partition as large as possible |
| Min | Grow the size of the partition by the smallest amount possible (1 cylinder) |
| Value | Grow the size of the partition by the size specified (in megabytes) |

Resize Left Boundary Smaller {Max | Min | Value }

Resize an extended partition larger by specifying the change in position of the left boundary. This operation is for extended partitions only. See also "Resize Left Boundary."

| Parameter | Description |
|------------------|--|
| Max | Same as Resize Left Boundary Min. Partition as small as possible |
| Min | Partition's size will be decreased by the minimum amount possible (1 cylinder) |
| Value | Partition's size will be decreased by the amount specified. (in megabytes) |

Resize Smaller {Max | Min | Value} [/Clustersize={512 | 1 | 2 | 4 | 8 | 16 | 32 | 64 }]

Resize a partition smaller by specifying the incremental change in size. See also "Resize."

| Parameter | Description |
|--------------|---|
| Max | Same as Resize Min. Partition as small as possible |
| Min | Partition's size will be decreased by the minimum amount possible (1 cylinder) |
| Value | Partition's size will be decrease by the amount specified. (in Megabytes) |
| /Clustersize | Sets the cluster size to the size specified during the resize operation. (The cluster size must be valid for the partition size specified.) |

Resize Space After {Max | Min | Value} [/Clustersize={512 | 1 | 2 | 4 | 8 | 16 | 32 | 64 }]

Resize a partition by specifying the free space desired after the partition after the resize is completed. See also "Resize."

| Parameter | Description |
|--------------|--|
| Max | Resizes so that the space after the partition is as large as possible (Partition is as small as possible) |
| Min | Resizes so that the space after the partition is as small as possible (Partition is as large as possible) |
| Value | Sizes the partition such that the space after is the size of value (in megabytes) |
| /Clustersize | Sets the cluster size to the size specified during the resize operation. (Cluster size must be valid for the partition size specified) |

Resize Space Before {Max | Min | Value }

Resize an extended partition by specifying the free space desired before the partition after the resize is completed. This operation is for extended partitions only.

| Parameter | Description |
|-----------|--|
| Max | Resizes so that the space before the partition is as large as possible (The partition is as small as possible) |
| Min | Resizes so that the space before the partition is as small as possible (The partition is as large as possible) |
| Value | Sizes the partition such that the space before is the size of value (in megabytes) |

Resize Clusters {Value | Min | Max }

Change the cluster size of a FAT partition.

| Parameter | Description |
|-----------|--|
| Value | Can be either 512, 1, 2, 4, 8, 16, 32, or 64. If the cluster size specified requires the partition to change size, the Resize Clusters operation will resize the partition as well. |
| Min | If specified, Min will change the partition to the minimum partition size possible. This may also require the partition size to change. If needed, the partition size will be changed. |
| Max | If specified, the partition will be modified to use the largest cluster size possible. |

Resize Root {Value | Min | Max }

Change the number of entries in the root directory of a FAT partition.

| Parameter | Description |
|-----------|---|
| Value | Must be a value between 512 - 1024. This will change the maximum number of root entries possible for this partition. The number actually set will be the closest number possible to the number specified. |

| Parameter | Description |
|-----------|---|
| Min | Sets the partition to having the smallest possible maximum number of root entries. |
| Max | Sets the maximum number of root entries for the partition to the largest number possible. |

Select Copy Drive {Num}

Select among the physical drives.

| Parameter | Description |
|-----------|--|
| Num | Number of the drive to select starting at 1. |

Select Copy Partition {PartitionLetter | "Volume Label" | Next | Previous | Num }

Select the partition or free space.

| Parameter | Description |
|-----------------|---|
| PartitionLetter | The drive letter of the desired partition. |
| Volume Label | Volume label of the desired partition. It must be in quotes. |
| Next | Must have had a partition selected previously. Do not use quotes. |
| Previous | Must have had a partition selected previously. Do not use quotes. |
| Num | Number of the partition or free block. This statement should always be preceded by a Select Drive statement. The first partition or free block on each drive is number 1. Partition numbers are displayed for each partition or free block if ServerMagic is run interactively. This is the only way to select free space for creating a partition. |

IMPORTANT! Use extreme caution when selecting a partition by partition number, as the numbers change as operations are performed. Once a partition is selected by number, it remains selected even if an operation changes the number of the selected partition.

Select Drive {Num}

Select among the physical drives.

| Parameter | Description |
|-----------|--|
| Num | Number of the drive to select starting at 1. |

Select Partition {PartitionLetter | "Volume Label" | Next | Previous | Num }

Select the partition or free space

| Parameter | Description |
|-----------------|---|
| PartitionLetter | The drive letter of the desired partition. |
| Volume Label | The volume label of the desired partition. It must be in quotes. |
| Next | Must have had a partition selected previously. Do not use quotes. |
| Previous | Must have had a partition selected previously. Do not use quotes. |
| Num | Number of the partition or free block. This statement should always be preceded by a Select Drive statement. The first partition or free block on each drive is number 1. Partition numbers are displayed for each partition or free block if ServerMagic is run interactively. This is the only way to select free space for creating a partition. |

IMPORTANT! Use extreme caution when selecting a partition by partition number, as the numbers change as operations are performed. Once a partition is selected by number, it remains selected even if an operation changes the number of the selected partition.

Set Active

Mark the selected partition as the active, or bootable, partition.

Set Default Bad Sector Test State { ON | OFF }

Set the bad sector testing ON or OFF for all partitions on the currently selected drive. The "/BadSectorTest" option overrides this setting.

Set Drive Read Only Mode { ON | OFF }

Set the read-only flag ON or OFF for all partitions on the currently selected drive. When set on for a drive, modifications to the partitions on that drive will not be allowed. Some changes to boot.ini files may be allowed if they exist on the read-only drive when add, delete or copy partition operations are done.

Set Ignore OS/2 EA Errors { ON | OFF }

This preference tells ServerMagic whether to ignore OS/2 Extended Attribute errors when checking a FAT partition.

IMPORTANT! If OS/2 is on your computer, do not enable this preference. Data loss could occur because problems might go undetected.

Set NT 64K FAT Clusters { ON | OFF }

If you set NT 64K FAT Clusters to ON, you can create FAT partitions with 64 KB clusters, which enables a FAT partition size up to 4 GB on Windows NT.

IMPORTANT! If you are using multiple operating systems, you should not use 64 KB clusters, since other operating systems will not be able to access the information in the partition.

To prevent you from inadvertently creating partitions with 64 KB clusters, this preference is disabled every time you exit ServerMagic.

Show Copy Partitions

The Show Copy Partitions command should be preceded by the following commands:

```
Select Drive {Num}  
Select Partition {PartitionLetter | "Volume Label" |  
Extended | Next | Previous | Num }  
Select Copy Drive {Num}
```

For the Show Copy Partitions command to work correctly a drive and partition need to be selected and a copy drive needs to be selected.

Show Partitions

Show Preferences

Unhide

Unhide the currently selected partition. See also "Unhide."

Script Suggestions and Notes

Although it is not necessary, PowerQuest recommends that you check each of the partitions that will be modified at the beginning of the script. Because a script file will terminate as soon as an error occurs, checking each of the partitions first will keep the script from making any changes before it finds errors.

Partitions must start on cylinder boundaries. For example, if you specify 10 MB, the real value could be 10.2 MB. The difference between the specified and actual values varies depending on the geometry of the drive.

When specifying an amount for one of the script options, the program will allow a margin of error of 1 cylinder above or below that amount (or a range of 2 cylinders centered on the amount specified). For example, if 10 MB were specified for a resize and a cylinder was .5 MB, that the operation would complete successfully if it could resize the partition to at least 9.5 MB. The actual range would be 9.5 to 10.5 MB. If it could not resize the partition within this range, it will return an error.

Under normal operation, if the script determines that it will not be able to reboot the machine after making the changes specified in the script, the script will terminate with an error. This condition will occur under OS/2 if the DOS.SYS file is not in the CONFIG.SYS (such as when you boot from the utility disks). You should include Allow Manual Reboot as the first script statement in the script if performing a manual reboot from the keyboard is not a problem.

All commands must be contained within one line. They cannot start on one line and finish on the next. The maximum length of a script line is 180 characters.

Use extreme caution when selecting a partition by its number. The select by number feature must be available to select free space or partitions that have no drive letter or label. The problem with selecting a partition by number is that the numbers can change throughout a script. If you select partition 2 and move it to the right, any free space that has been moved from the right to the left side of the partition will now become partition 2. (The partition moved will still be selected regardless of the number). Using the Select

Partition Next and Previous commands are usually preferable to selecting free space by partition number. With most operations, the partition selected after an operation will be the partition operated on. For example, Resize and Move will always leave the partition operated on as the selected partition after the operation. On a Create command, the partition created will be selected after the command whether it is at the beginning or end of the free space it was created in. If there is any doubt as to which partition will be selected after an operation, you can use SMAGICT (without scripting) and perform the same operation on a test machine and observe which partition is selected after the operation. You can also use the Show Partitions command to show the current status of partitions.

Sample Scripts

Scenario 1: Moving space from one partition to another

The user has C:, D:, and E: drives. There is no free space on the disk. All are primary partitions.

The user wants to take 10 MB from D: and add it to E:.

```
SCRIPT1.FIL
//Check the partitions to be operated on first
Select Partition D
Check
Select Partition E
Check
//Select the first partition I want to change
Select Partition D
//Shrink the partition by 10 megabytes
Resize Smaller 10
//Select the partition to add the 10 meg to
Select Partition E
//Move the partition as far as possible to the left so that
//the free space just created will be on the left edge (the
//end)
Move Left Max
//Take up all of the available space
```

Resize Larger Max

Scenario 2: Creating logical partitions

The user has one large C: partition on the drive. The drive is 1.2 gigabytes in size. The user has only 300 MB of data on the partition and would like to create logical drives D and E. The E drive needs to be 300 MB and the rest of the disk space is to be split between the C and D drives.

```
SCRIPT2.FIL
//Check the partition first
Select Partition C
Check
//Partition C is already selected so shrink it to 450 MB
Resize 450
//Since the C partition is still selected after the resize,
//we need to select the free space created
//after C.
Select Partition Next
//Create the extended partition to the default size, which
//will be all of the free space currently selected
Create /FS=EXTENDED
//The Extended partition is now selected, and we want to
//select the next free space in the extended partition.
Select Partition Next
//Create the partition that we need to be 300 MB first at the
//end of the free space that is currently selected. (What
//will be the E partition)
Create /FS=FAT /Label="DBFILES " /Size=300 /Position=END
//Select the rest of the free space within the extended
//partition. Since the last partition was
//created at the end of the free space, we need to move to
//the free space previous to the selected partition
Select Partition Previous
//Create the partition in the rest of the free space
Create /FS=FAT /Label="APPS"
```

Scenario 3: Adding a FAT partition

The user has C:, D: and E: partitions on one physical drive. There is no free space on the disk.

The C partition is a primary partition and the D and E partitions are logical drives in an extended partition. The user wants to create an F: partition with 40 MB of free space that is in the C partition. The F: partition will be a FAT partition with a volume label of "DATA" and since the drive is fairly new, the user would like to skip bad sector testing for all operations.

```
SCRIPT3.FIL
//Check all of the partitions first
Select Partition C
Check
Select Partition D
Check
Select Partition E
Check
//Since a partition on this drive had already been selected,
//we can set the default bad sector testing to off for this
//drive
Set Default Bad Sector Test State Off
//Select the C partition and shrink it by 40 MB
Select Partition C
Resize Smaller 40
//Select the extended partition and resize the left
//boundary to the right edge of the C partition (max),
//putting the free space within the extended partition. To
//select the extended partition, partition 3 is selected.
//(Free space created in the previous step became partition
//2 and incremented the numbering of all subsequent
//partitions on the drive.)
Select Partition 4
Resize Left Boundary Max
//Select the D partition and move it to the left, essentially
// flush against the Extended and C partitions, leaving the
```



```
// free space between the D and E partitions
Select Partition D
Move Left Max
//Select the E partition and move it as far as possible to
//the left, so that the free space will be at the end of E,
//within the extended partition
Select Partition E
Move Left Max
//The free space is now after E and the user
// can create an F partition (logical drive)
//Move to the free space after E
Select Partition Next
//Create the FAT partition called DATA with all defaults.
//This will use all of the size available in the free space.
Create /FS=FAT /Label="DATA"
```

Scenario 4: Resizing existing partitions and adding a new one

The user has a C partition which is a 100 MB primary partition. The next partition is a hidden partition called WARP_OS which is a 100 MB, primary FAT partition. There are also two 70 MB logical drives, D and E, in an extended partition.

The user wants to reduce both the C and hidden partitions to 60 MB, add 40 MB to the D partition, and create an F partition (HPFS) with the remaining free space. The user also wants to convert the hidden partition from FAT to HPFS. The user also does not care whether the machine can reboot under program control or not.

```
SCRIPT4.FIL
//Inform that a manual boot is acceptable
Allow Manual Reboot
//Check all of the partitions first
Select Partition C
Check
//The hidden partition is selected by using the volume label
//in quotes
Select Partition "WARP_OS"
Check
```

```

Select Partition D
Check
Select Partition E
Check
//Select the C Partition and resize it to 60 MB
Select Partition C
Resize 60
//Select the hidden partition
Select Partition "WARP_OS"
//Move the partition flush against the C partition (since it
//was just resized) putting the newly created free space
//after the hidden partition
Move Left Max
//Resize the hidden partition to 60 MB
Resize 60
//Convert the partition from FAT to HPFS
Convert To HPFS
//Expand the extended partition so that the free space is now
//inside the expanded partition
Select Drive 1
Select Partition 4
Resize Left Boundary Max
//Move the D partition flush against the hidden and extended
//partitions
Select Partition D
Move Left Max
//Add 40 MB to the D partition
Resize Larger 40
//Move the E partition next to the D partition
Select Partition E
Move Left Max
//The Free space is now available at the end of the extended
// partition so that the user can create an F logical drive.
//Select the free space

```

```
Select Partition Next
//Create the HPFS partition.
Create /FS=HPFS
```

Scenario 5: Cluster Analyzer

The user has a 3.2 GB drive. He has a 2MB, primary Boot Manager partition. He has a 1 GB, primary, FAT C: partition. He also has a hidden primary FAT partition that is 1 GB. He likes to boot multiple operating systems and the third partition holds another operating system. He also has an extended partition with logical drives that uses up the rest of the drive space.

The user would like to analyze the two FAT partitions to see if he can reduce the cluster waste.

```
// Show Cluster Waste for Partition 2
Select Drive 1
Select Partition 2
Cluster Analyzer /ShowClusterWaste
// Show Cluster Waste for Partition 3
Select Drive 1
Select Partition 3
Cluster Analyzer /ShowClusterWaste
```

The user can now see that he can reduce cluster waste so he will use the Cluster Analyzer to reduce waste again. He will set the third partition to the recommended size and the second partition to a cluster size of 8K.

```
// Set Partition 3 to Recommended Cluster Size
Select Drive 1
Select Partition 3
Cluster Analyzer /SetToRecommended
// Set Partition 2 to 8K Clusters
Select Drive 1
Select Partition 2
Cluster Analyzer /ClusterSize=8
```

Scenario 6: Copy

The user has just installed a new drive he would like to copy the first three partitions on drive 1 to drive 2. Drive 2 is formatted and is free space.

```
// Select Drive 1, Partition 1
Select Drive 1
Select Partition 1
// Select Copy Drive 2, Copy Partition 1
Select Copy Drive 4
Select Copy Partition 1
// Copy First Partition
Copy
// Select Drive 1, Partition 2
Select Partition 2
Select Copy Partition 2
// Copy Second Partition
Copy
// Select Drive 1, Partition 3
Select Partition 3
Select Copy Partition 3
// Copy Third Partition
Copy
```

Scenario 7: Info

The user would like to get information about FAT partition (C:). He would like to know about the disk usage, the cluster waste, partition information, and file system information.

```
Select Drive 1
Select Partition 1
Info /Usage /Waste /Partition /FS
```

This could also be accomplished as follows.

```
Select Drive 1
Select Partition 1
Info /Usage
```

Info /Waste
Info /Partition
Info /FS