

PowerChute Network Shutdown with more than 50 Computers on One UPS

PowerChute network shutdown works with the Web/SNMP Management Card to provide graceful shutdown of computers powered by a UPS. The number of computers is limited only by the power capacity of the UPS. If, however, you wish to have more than 50 computers powered by one UPS, some consideration must be given to the system configuration. Knowledge of the communication between PowerChute and the Management card is necessary.

How UPS Information is Sent Over the Network

The Management Card provides an interface between the UPS and your network. The Management Card has an IP address, and is accessible by FTP, telnet, SNMP, and the internet. The Management Card sends UPS information to PowerChute network shutdown over the network in the following manner:

- The Management Card in the UPS has a list of IP addresses (up to 50) of computers running PowerChute network shutdown. The Management Card broadcasts UPS information on the local network segment (the segment on which the Management Card resides), as long as it has at least one IP address on its list that is on the local segment. It will also send unicast messages to each address on the list that is on a different network segment.
- Each PowerChute network shutdown computer that receives a unicast message from the Management Card will rebroadcast that message on the local network segment (the segment on which the PowerChute computer resides). Other PowerChute computers on that segment will receive this broadcast message, regardless of whether they received a unicast message.
- A PowerChute computer will not rebroadcast the message if it has already received a broadcast message from another computer. This is done to reduce the amount of broadcast traffic on a segment.

Broadcast and unicast messages are sent every 25 seconds.

In figure 1 below, all 11 segment computers will receive broadcasted UPS data every 25 seconds while PowerChute computers on the 12 segment will receive unicasted UPS data every 25 seconds.

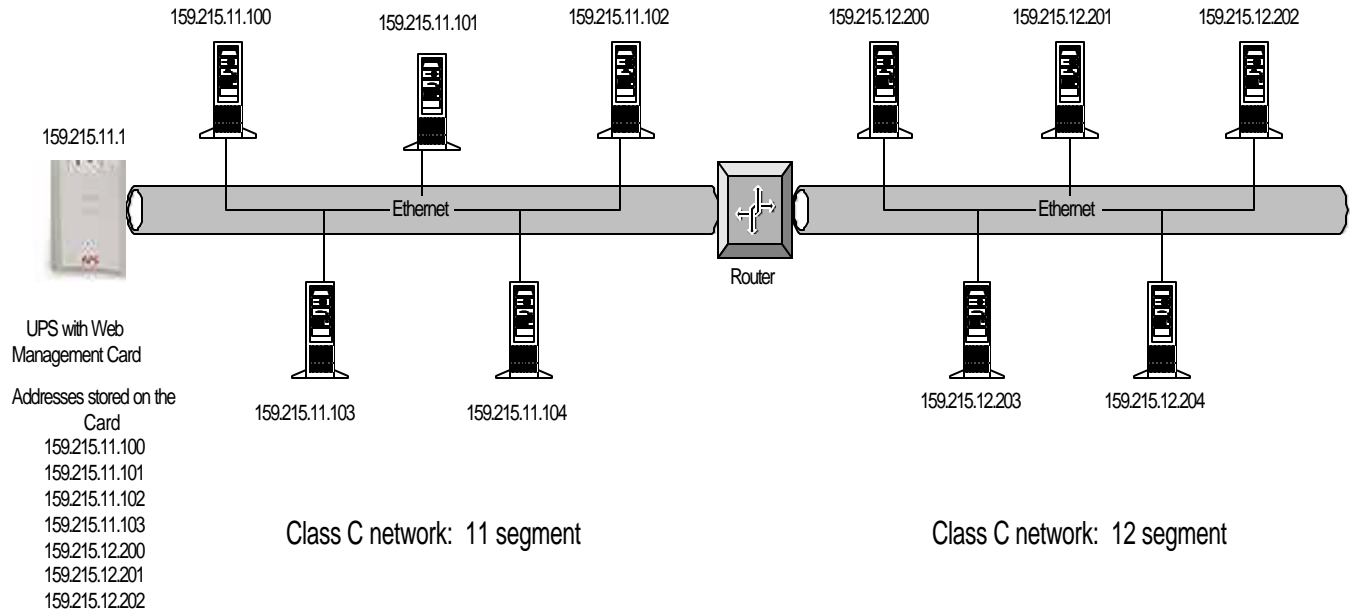


Figure 1

In figure 2 below, computers 159.215.11.100, 159.215.11.101, 159.215.11.102, 159.215.11.103, and 159.215.11.104 will receive broadcast information from the Management Card.

Computers 159.215.12.200, 159.215.12.201, and 159.215.12.202 will receive unicast information containing the UPS data.

Computers 159.215.12.203 and 159.215.12.204 will receive rebroadcasted data from PowerChute computers on the 12 segment only. These computers will not receive unicast information from the web card.

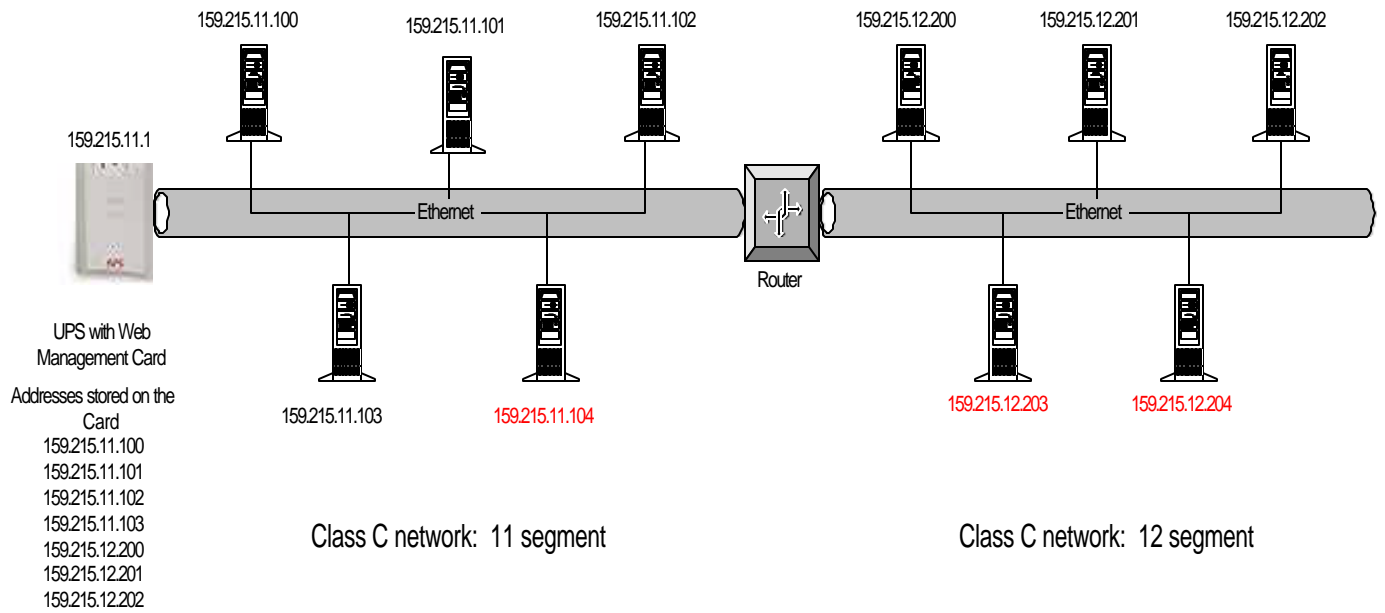


Figure 2

IP Addresses Stored on the Management Card

The Management card can store 50 IP addresses. One of these should be the IP address of a PowerChute computer on the local segment, which will cause the Management Card to broadcast on that segment. The Management Card will send unicast messages to the remaining addresses (or ignore them, if they are on the local segment). If you have more than 50 computers connected to the UPS, you must determine which computers will receive broadcast messages, and which will receive unicast messages. To make this decision, notice the following conventions:

- Computers that are on the same network segment as the Management Card will receive broadcast messages from the Management Card. Only one of these computers needs to have its IP address stored in the Management Card.
- Computers that are not on the same network segment as the Management Card can receive unicast messages from the Management Card, or broadcast messages from another PowerChute computer on the same network segment. You must decide which computers will have their IP addresses stored on the Management Card. For reliability, it is recommended that at least two computers on each segment have their IP addresses stored on the management Card.

UPS Turnoff

In the event of an extended power failure or a UPS fault, it is desirable to shut down the powered computers gracefully and then turn off the UPS. The powered computers will be rebooted when the UPS is turned back on, either when power returns or the fault is corrected.

Only computers with IP addresses stored on the Management Card are allowed to order the UPS to turn off.

In figure 2 above, computers 159.215.11.100, 159.215.11.101, 159.215.11.102, 159.215.11.103, 159.215.12.200, 159.215.12.201 and 159.215.12.202 will be able to turn off the UPS.

Computers 159.215.11.104, 159.215.12.203, and 159.215.12.204 will not be allowed to turn off the UPS.

Putting the IP Addresses on the Management Card

When you execute the PowerChute network shutdown installation program, it will add the IP address of the computer to the list stored on the Management Card. If the list is already full (contains 50 addresses), then the new address will not be added.

When you execute the silent installation (command line installation) for PowerChute network shutdown, you can choose whether or not to add the computer IP address to the Management Card's list. Refer to the PowerChute network shutdown installation guide for details on how to do this.

You can add or delete IP addresses from the Management Card at any time through the Management Card user interface. Refer to the Management Card installation guide or the PowerChute network shutdown installation guide for details on how to do this.