In this series, we are looking at how physical security can support the security needs of network operations centers (NOCs) and data centers (DCs). Today's brief note is a continuation of a sub-series on electrical power and related topics.

The size of the batteries in your UPS and the drain by your systems determine how long the UPS can keep your system going. At a minimum, you need time for a graceful shutdown; 5 minutes is ample to allow you and your users to exit from application systems and shut down all peripherals and processors. If there is a reason to continue operating your system during a power failure (e.g., to protect the security computer that controls your physical access control systems), you may have to order extra batteries (for hours of operation) or a generator (for continuous operation as long as the fuel lasts).

Not all UPSs allow for addition of extra batteries, so examine the specifications carefully if you are thinking of providing extended run-times. Some systems are made to be completely customizable, with rack-mounted batteries that you can order and add at any time without fuss.

Just in case anyone reading this has the bright idea of hooking up one UPS to another, don't. The second law of thermodynamics ensures that all you will do is waste the battery power of the first unit as you try to charge the second one. You can run two or more UPSs in parallel as when you attach different equipment to different UPSs.

It's a good idea to do a dry run with your new UPS: you really want to have a clear idea of just how long you are going to have once the external power fails. I have timed how long I can run without external power: almost exactly 30 minutes for my setup. At that point, the tolerable repeating beep from the UPS turns into an annoying whine; I save my work to disk, exit from my application, fire up the file transfer software and get the current working documents over onto my portable computer so I can keep working once all the power is down. Then I immediately shut down the main system.

Next time, some comments on emergency electrical generators.

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Mich Kabay can be reached by e-mail at <mkabay@atomictangerine.com>. He invites inquiries about a wide range of information security courses he would be delighted to deliver to your employees at your site and at your convenience.

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