Physical Security: 
Electricity (2)

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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.

For PCs, work stations and servers, UPS units in the 0.4-1.2 KVA (kilovolt-ampere) range are sufficient; they range in cost from about $75 for a little device about the size of a large surge-suppressor that gives you just enough time to shut a PC down gracefully to over $1,000 for a sizable unit that can power your entire office. Keep in mind that you have to plan for peak loads, not just the average power drain. Big laser printers, for example, can run at 700 watts while warming up yet function on standby at a mere 100 watts. Older, physically larger disk drives take much more power while spinning up than while running normally. However, modern tiny, ultra-dense drives (e.g., 10 Gb on a 1.5" spindle) require so little power anyway that they're no longer an issue.

In my office, I run a 0.9 KVA UPS connected to a power conditioner. All my essential gear is connected to the UPS: processor tower, monitor, fax, phone, and even one lamp. I don't put the printers or the stereo system on the UPS. Many people will deliberately exclude their printers from the calculations for their proposed UPS. They can live without the printer when it loses power. At worst, they may have a single damaged page to reprint.

The less load you put on the UPS, the longer it will last. If you're lucky you will not only be able to avoid catastrophic errors but even keep working until the power comes back.

Next time, more about loading and testing your UPS.

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