



The Purple Guide to Greener Networking

Your enterprise is environmentally responsible. You take care not to waste energy unnecessarily. You turn off lights and switch off appliances after hours. However, there is one area of energy consumption that is often overlooked: the network!

IT equipment can consume vast amounts of energy. In fact, you could probably save more energy and associated costs by tackling this one area of your business, than all your other power consumables combined. And, you'll be doing your bit for the environment at the same time.

Establishing the right network foundation, you can help you:

- Cut your network energy consumption
- Shave thousands off your energy bill
- Reduce your carbon footprint

This quick guide outlines how you can cut energy consumption and costs – from the core to the edge of the network.

Three Smart Ways To Save Network Power

1. Buy Ethernet switches that consume less power
2. Design the network to use less power
3. Optimise power to edge ports and devices

Buy Green

- Specify network equipment that uses less power
- Include power consumption in your RFP process
- Assess how much power products consume over the life of the network
- Look for Ethernet switches that consume less energy during normal operation

Save energy over the life of your network and reduce operational costs.

It's Official:

Extreme Networks Switch is "Greener"

Extreme Networks, Inc. commissioned The Tolly Group to evaluate the power consumption of its BlackDiamond 8810 series switch versus comparable core switches *. The results of the test show that the BlackDiamond 8810 consistently demonstrates more efficient power consumption than the Cisco and Foundry switches tested, both of which use from 2X to 3.5X more power.

A number of different traffic load scenarios were used to test the switches, from no load on the switch to a heavily taxed load.

The results of the tests showed that the BlackDiamond 8810 Core Switch:

- Uses 3.3X to 1.7X less power when all line cards modules and cables were connected
- Uses 3.5X to 2.3X less power when maximum Layer 2 bidirectional traffic was introduced
- Exhibits the "greenest" or most energy efficient chassis switch tested, using from 3.4X to 2X less power on average across all test scenarios

The tests were concluded in January 2008.

* The Tolly Group tested the Cisco Catalyst 6509, and the Foundry BigIron RX-16.



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Reduce costs and power usage by between 50 and 75 percent

Introduce energy-efficient switches throughout your enterprise to reduce your operational costs and carbon footprint.

A typical Ethernet modular switch supporting 400 total ports can consume between 6 and 12 watts per port, or between 2.6 and 5.2 Kilowatts per device. With updated technology and innovative power saving design from Extreme Networks, you can reduce consumption to as little as 1.3 Kilowatts per device.

Design Green

Use power more efficiently by reducing the number of switches and devices required to serve the enterprise:

- Design the network to be more energy efficient
- Collapse the traditional three-tier network to just two tiers – the core and the edge
- Remove the aggregation layer of the network and associated energy consumption

Specify a network design that uses less switches and devices, and removes the energy-hungry aggregation layer.

The introduction of more powerful Ethernet switches and technological breakthroughs such as system resiliency has meant that the network designers can now collapse the traditional three tier network to just two tiers. Intelligent design can reduce the number of switches and devices by a third or more. And as a result, less power is needed to run the network and you save on capital expenditure.

Green The Edge

In the same way that maintenance teams turn off lights and appliances in an unoccupied building, you can use less power at the network's edge by optimising powered devices:

- Use native software intelligence to optimise powered devices connected at the network's edge
- Introduce automated power management to optimise Power over Ethernet devices
- Make use of Universal Port technology to gain intelligence about events and operations throughout the network, and turn off equipment that is not needed
- Power down non-essential devices, such as Voice-over-IP handsets, out of office hours

Today's Ethernet switches support 802.11af standards-based Power over Ethernet (PoE). This transmits power over the copper twisted-pair wiring to devices connected at the network edge, allowing electrical power to be transmitted to each port along with data bandwidth connectivity. Devices such as IP phones, cameras and Wireless LAN Access Points can be powered by the network whilst receiving data bandwidth. There's no need to wire a building for both LAN and power needs.

Green By Extreme

We're taking green to the extreme. Extreme Networks products offer secure, highly available connectivity for voice, video and data. Our high performance fast Ethernet Summit® series switches used as the backbone of our Go Green solution are based on our revolutionary ExtremeXOS, a highly resilient modular operating system that can provide high performance, manageability and operational efficiency at an affordable price.

To find out more about our Go Green solutions, email xxxxx@xxxxxx.com



www.extremenetworks.com

email: info@extremenetworks.com



Corporate and North America
Extreme Networks, Inc.
3585 Monroe Street
Santa Clara, CA 95051 USA
Phone +1 408 579 2800

Europe, Middle East, Africa and South America
Phone +31 30 800 5100

Asia Pacific
Phone +852 2517 1123

Japan
Phone +81 3 5842 4011

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