Power Availability Solutions for Service Providers

Centralized, zone, and distributed power availability solutions from APC
Optimize Your Power Availability

Consider how switches and routers are sold to service providers and enterprises today. The concept is a “fully meshed network”. The failure of any component in this meshed network is offset by the architecture of the network itself. If a router fails in location A, traffic is rerouted thru location B with no perceived loss of performance. This is **global non-stop networking**.

APC’s contribution to global non-stop networking is providing a stable and highly available power infrastructure for service provider networks. Considering the following issues will help determine a power solution that fits your specific business:

**Availability Target**

Your business processes set the availability target. There will be cost tradeoffs between five 9’s and four 9’s. Solutions that require N+1 scalable, redundant power are available from APC.

**Network Architecture**

A centralized network has a choice of power architecture: centralized, zone-based, or distributed. A distributed network is more limited in its choice of a power architecture solution.

**Business Model**

Cash constraints on your growing business may push your power solution toward smaller products powering individual racks of equipment or zones. As your network grows smaller increments in power mean smaller cash outlays. Lifting these cash constraints can shift consideration to a centralized architecture.

**Management Needs**

Any of the power solutions you choose from APC can be managed from a NOC or other management facility, providing warnings of power failures and allowing you to keep your network up and running.

Given consideration to these four issues, an optimal and comprehensive power system architecture can be created around one of the one of the 3 fundamental models: Centralized power solutions, Zone-based power solutions, and Distributed power solutions.

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**UUNet Technologies**

UUNet Technologies is the largest Internet provider in the world. With more than 12,000 corporate customers and more than one million home-based users and growing daily, no one connects more people to the Internet. That means no one is at greater risk to disappoint its customers if its network goes down. To make sure that doesn’t happen, UUNet utilizes APC power protection to maintain its high standards of reliable, uninterrupted service.

At each of 28 major UUNet hubs, APC Smart-UPS safeguards the infrastructure and keeps the power flowing smoothly. What’s more, every UPS is equipped with a PowerNet SNMP Adapter, and each site has its own Call-UPS II. UUNet also is taking advantage of Smart-UPS’ rack-mount capability in its APC protection package.

The company has good reason to stick with APC, as Smart-UPS have stood up to a barrage of power problems. Through 20 separate major electrical upgrades in various locations, APC units have helped keep UUNet up and running.

Says Aaron Possien, installation supervisor for UUNet Technologies, “During each of these processes, APC’s Smart-UPS performed flawlessly…. We’re very impressed by the products and service we’ve received from APC.”

While UUNet may be a company that never sleeps—after all, it strives to operate on a zero downtime principle—its people can sleep well knowing APC units are protecting the infrastructure. As Possien says, “APC’s well-known reliability gives us peace of mind.”
Scalable, redundant Power Array for “zone-based” power protection
• Modular design makes service simple
• Scalable power and scalable runtime
• N+1 redundancy provides highest availability
• Available up to 16kVA

On-line, power factor corrected AC UPS for “centralized” power protection
• 95% efficient
• Compact design with small footprint
• N+1 architecture options
• Input power factor corrected to 1
• From 10 kilowatts to 3 megawatts

APC Symmetra™ Power Array™

Advanced power management for “distributed” power protection
• Intelligent line-interactive technology
• Full suite of power management accessories and software
• Rack-mounted or standalone models up to 3kVA

APC Smart-UPS®

Power conversion for running AC equipment in a DC environment
• Provides clean uninterrupted AC power from -48Vdc input
• Available from 1000VA up to 40kVA

APC DC/AC Inverters

Remote outlet control for cycling power to network components
• Ease the burden of managing remote sites and maximize uptime
• Eight independently switched outlets
• Manage via Web, SNMP, or out-of-band with RS-232 interface

APC MasterSwitch®

Tools for intelligent and remote management
• APC Web/SNMP Management Card - manage power via standard Web browser
• Call-UPS™ II - manage power via modem
• Measure-UPS™ II - monitor ambient temperature and humidity
• SmartSlot™ Relay I/O Module - control and monitor power through a dry-contact interface

APC Power Management Accessories®

For more information, call 800 890 4APC, x5198
Choose between centralized, zone, or distributed power availability architecture

Centralized power availability architecture
The "Centralized" power availability solution is the traditional approach to selecting power availability for a large project. Estimate the total load expected over the life of the project. Select a UPS with enough headroom to accommodate the estimate. APC’s Silicon family offers a power factor corrected design with the ability to build in \( N+1 \) redundancy to your network power infrastructure. Silicon’s small footprint makes an excellent choice for large centralized power requirements.

Zone power availability architecture
The "Zone-based" power availability solution for a fast growing business breaks down the total load into more manageable segments. Able to power multiple racks of network equipment, APC’s scalable Symmetra Power Array protects a "zone". The modular design of this UPS allows the user to configure a single chassis from 4kVA up to a fully loaded 16kVA. The system power grows with the business. As the "zone" of equipment taps the capacity of the UPS another zone may be started on another Symmetra chassis. This "zone-based" architecture uses precious corporate capital more efficiently and raises the ROI of the investment in power availability.

Distributed power availability architecture
The "Distributed" power availability solution uses smaller individual APC Smart-UPS to protect a single rack of equipment. As the number of racks grows within the business, the number of UPSs grows in direct proportion. This power architecture solution could be used where there are tight capital constraints on a business which prohibit a large outlay of funding for unused power infrastructure.

APC Global Services (AGS)
APC’s Global Services Group provides comprehensive end-to-end service and support to APC customers and partners around the world. Our goal is to provide a continuous supply of power to our customers’ systems, networks, and facilities, regardless of circumstances.