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## Power Reboot in Lights Out Data Centers

### The Challenge:

During the last decade, more and more corporations have come to rely on Lights Out Data Centers as a secure, economical solution for data storage and sharing. As a result, the need for a reliable means to deal with problems at these often remote and physically inaccessible facilities has also grown. In a typical lights out data center, most routine troubleshooting and maintenance tasks are performed by a centralized IT Support department that is often responsible for maintaining multiple lights out data center facilities spread around the country or across the globe.

### Requirements:

- Remote management of power reboot functions via out-of-band access A compact footprint to conserve valuable rack space
- A centralized Enterprise Management interface that allows administrators to locate and control many different reboot units installed at different locations
- Monitoring and Alarm functions to detect unacceptable temperature levels and unresponsive devices
- Security and authentication features to prevent unauthorized access to reboot functions

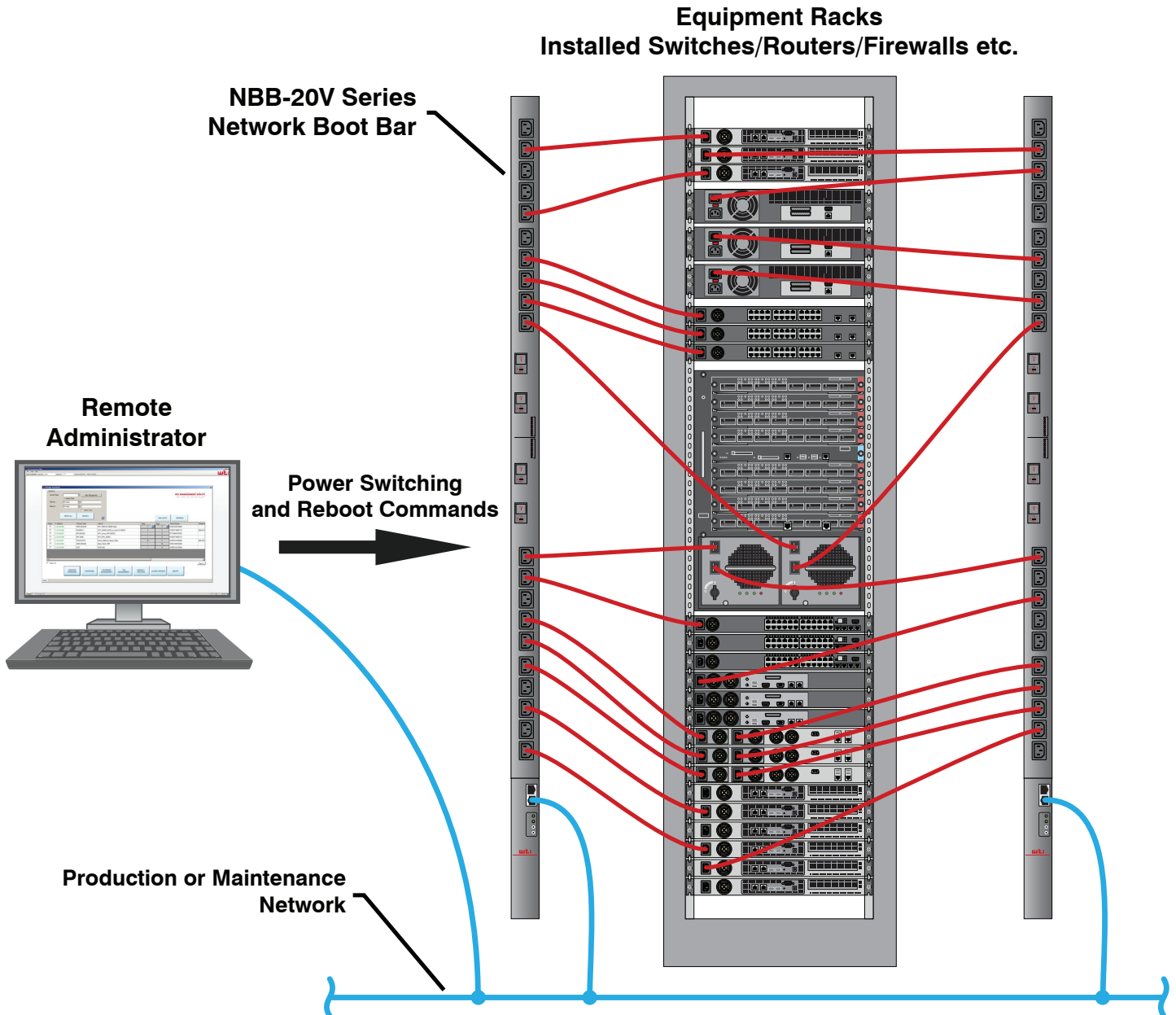
In lights out data centers, most routine tech support tasks are accomplished via KVM. Although this provides a reliable means for dealing with many common issues at remote sites, there are still situations where a malfunctioning network element at the lights out data center can disrupt direct network communication, temporarily eliminating access to KVM functions. In cases like this, lights out data center support teams need out-of-band access to power reboot functions at the remote site in order to restore network communication and KVM access.

In large, wide-spread lights out data center applications, administrators require an out-of-band management solution that allows them to identify and control many separate reboot units, often located in various different data centers. In some cases, administrators also need the ability to select a group of units, based on functionality, and then apply power control and reboot commands to all units in that group. In addition to these common troubleshooting functions, system administrators also require an account management solution that provides the ability to manage passwords and user accounts for many reboot devices without the need to individually address each reboot device.



## The Solution:

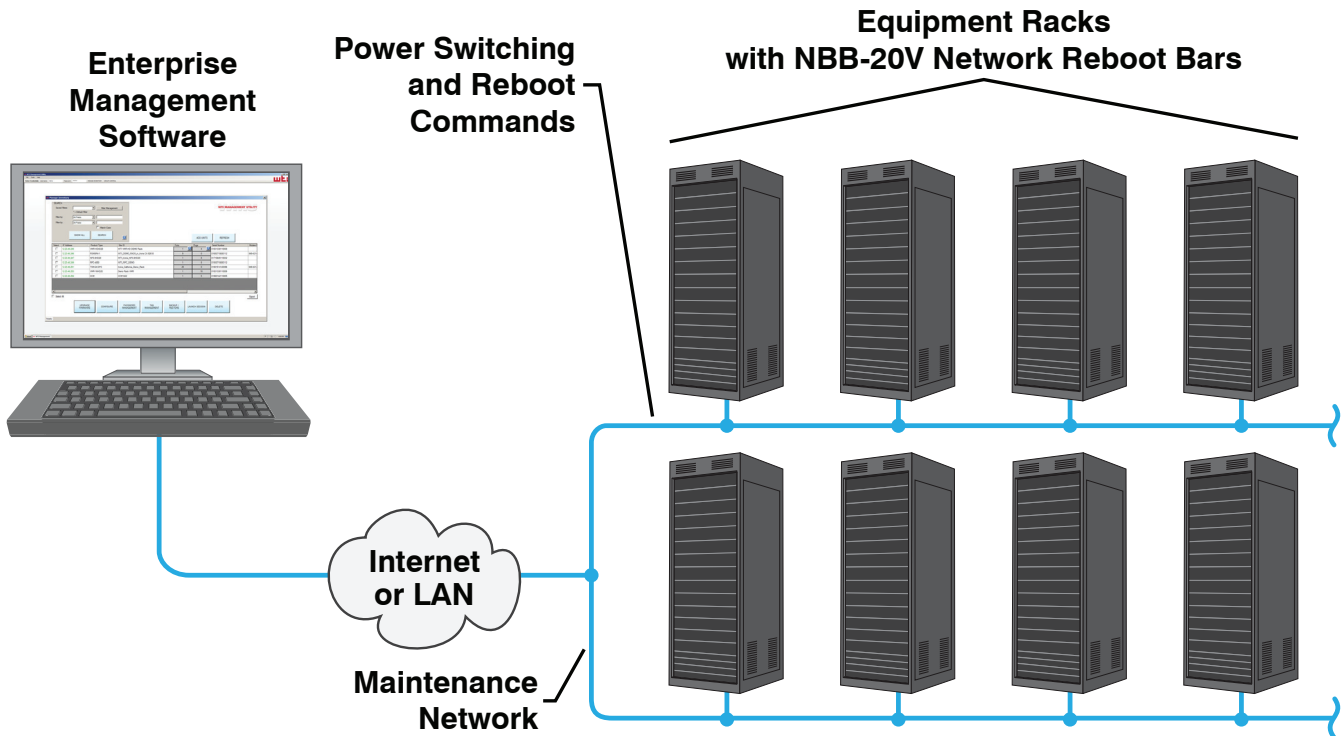
WTI's NBB series Network Boot Bar provides a secure, compact means to remotely reboot networked devices located in inaccessible areas such as lights out data centers, remote equipment enclosures and micro data centers. The NBB is a vertical format, zero-unit reboot bar that easily mounts to equipment rack support posts, providing remote reboot capabilities for up to 20 separate devices without the need to sacrifice valuable rack space.



In addition to providing secure, out-of-band access to power switching and reboot functions, the NBB also includes a versatile assortment of user-configurable monitoring and alarm functions. The NBB can monitor factors such as rack temperatures, unresponsive devices, power supply stability and other conditions and events and then automatically generate an alarm when any of these factors exceed user-defined trigger levels.



In order to simplify the challenge of controlling and managing an assortment of NBB reboot bars, spread across multiple lights out data centers, the NBB also includes a versatile Enterprise Management utility. The WMU Enterprise Management Software allows administrators to locate all WTI reboot devices within user specified IP ranges and then sort those WTI devices into groups based on location, function, department or other factors. In addition to providing the ability to control power switching and reboot functions at all applicable NBB units, the WMU also enables tech support personnel to manage passwords and user accounts for all NBB devices in inventory, review the status of any NBB device in inventory and also perform firmware upgrades for all discovered NBB devices.



To ensure that access to critical power control functions is aggressively protected from unauthorized access, the NBB includes a formidable array of security and authentication features. In addition to a user directory and support for popular authentication protocols, the NBB also features robust encryption capabilities, an IP address filter, SSH/HTTPS compatibility and other advanced security functions to prevent unauthorized access and ensure confidentiality of communication with the unit.

#### Results:

- Secure, reliable access to power control and reboot functions in remote, inaccessible facilities
- State-of-the-art power control without the need to sacrifice valuable rack space
- An Enterprise Management Solution that simplifies the task of managing and controlling multiple NBB reboot units spread across corporate infrastructure
- Improved tracking of conditions and events at remote equipment sites



## **About the NBB Network Reboot Bar**

The NBB Network Reboot Bar is a vertical format power and reboot unit that combines remote reboot and power control capabilities with sophisticated monitoring and notification functions in a single 0U device. The NBB easily mounts to equipment rack support posts without wasting valuable rack space. When partnered with WTI's versatile WMU Enterprise Management Software, the NBB provides a perfect solution for managing reboot and power control activities for hundreds of compatible WTI devices located at multiple remote facilities.

- Extremely reliable remote management of power control and reboot functions
- A compact, 0U remote power control solution that doesn't take up additional rack space
- Immediate notification when conditions and events in the lights out data center trigger user-defined alarms
- Secure, private communication and control
- A centralized interface for out-of-band management of enterprise-wide power switching and reboot functions