

Integration Notes

Dominion PX rack PDU integration with CommandCenter Secure Gateway 4.0

Overview

CommandCenter® Secure Gateway (CC-SG) supports in-band and out-of-band management of IT devices. Out-of-band management is accomplished through KVM and serial console switches, whereas in-band management is achieved by direct communication between the CC-SG and the managed IT devices via the IP network.

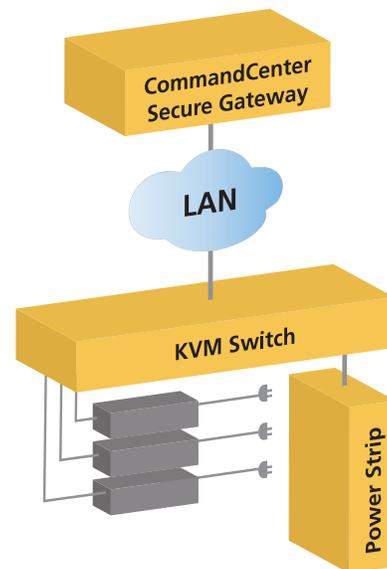
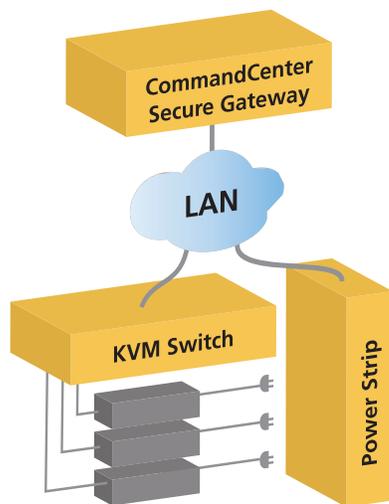
In previous versions of CommandCenter Secure Gateway, power to IT devices could be controlled through Raritan Dominion® KVM or serial console switches. The switch, in turn, is connected to the remotely managed power distribution unit with a dedicated power computer interface module (CIM). By virtue of controlling the KVM or serial console switch, CC-SG can issue power commands to the power distribution unit connected to that switch. CC-SG consolidated power control capability allows you to associate multiple PX outlets from different power distribution units to the same node. Therefore, when a server is power cycled, CC-SG can issue

simultaneous power cycle commands to outlets on different PX units in order to disconnect and then reconnect power in order to reboot the server. Furthermore, CC-SG has the ability to group outlets into any structure you wish to define and issue group power commands. Group power commands can also be scheduled as tasks. For example, you can create a "rack" group in CC-SG and issue a single power shutdown command to power down the whole rack at midnight of the next day.

With the release of CommandCenter Secure Gateway 4.0, the power functionality described above can now also be managed in-band. In-band management is accomplished through a direct Ethernet connection between the CC-SG and Dominion PX without involvement of an out-of-band KVM or serial console switch. By supporting both in-band and out-of-band power management configurations, CommandCenter Secure Gateway provides greater flexibility in how you choose to deploy and manage your data center.

Two Ways To Set Up PX

Network diagram depicting two possible setup configurations for PX to be managed by the CC-SG.



Making connections: How the CC-SG 4.0 works directly with the Dominion PX.

CC-SG's new in-band integration capability allows it to discover Dominion PX power distribution units on the IP network. Once discovered, a power distribution unit can be easily added to the CC-SG, and each of its outlets can be configured and added to a node (e.g., a server) to control the power source to that node. CC-SG can also add a single Dominion PX by specifying the IP address of that PDU.

As part of this new functionality, a Dominion PX added to the CC-SG is treated like any other device managed by the CC-SG. The PX will appear in the CC-SG device tab as a managed device along with other Raritan products like Dominion KX, KSX, SX and Paragon® switches. Information can be configured on the PX via the device tab, and the administrative management application can be launched to that managed device in order to set specific values on a PX (similar to how device management is done on other Raritan switches).

Control of the new in-band power distribution unit is similar to out-of-band integration. Specifically, you can associate

individual outlets to nodes and issue power control commands, or launch a KVM session or CLI console from the same screen. While Raritan provides you with the flexibility to choose the implementation that is appropriate for your organization, you may want to consider the benefits of each in order to make the decision that best serves your needs.

What's right for you? The benefits of each implementation.

Both connections to a PX – through a Dominion KX II KVM switch with a power CIM and directly to the CC-SG – support remote ON, OFF and RECYCLE power commands to the selected outlets on the PX. However, each implementation offers its own benefits.

When compared with an out-of-band implementation, in-band does not require allocation of a port on a Dominion KX, KSX or SX switch and does not require any specialized CIM or power control cable. This could translate to substantial savings if calculated over a large number of PX devices. While this may be an advantage in some situations, you do have to consider that in-band PX management does require allocation of an IP address

The screenshot shows the Raritan CommandCenter Secure Gateway interface. The 'Discover Devices' dialog box is open, displaying the following information:

- From IP Address: 192.168.57.0
- To IP Address: 192.168.57.255
- Mask: 255.255.255.0
- Device Types: Dominion KSX, Dominion KSX2, Dominion KX, Dominion KX101, Dominion KX2, Dominion KX2-101, Dominion PX, Dominion SX, JP-Reach, Paragon II System Controller.
- Options: Broadcast Discovery, Include IPMI Agents.

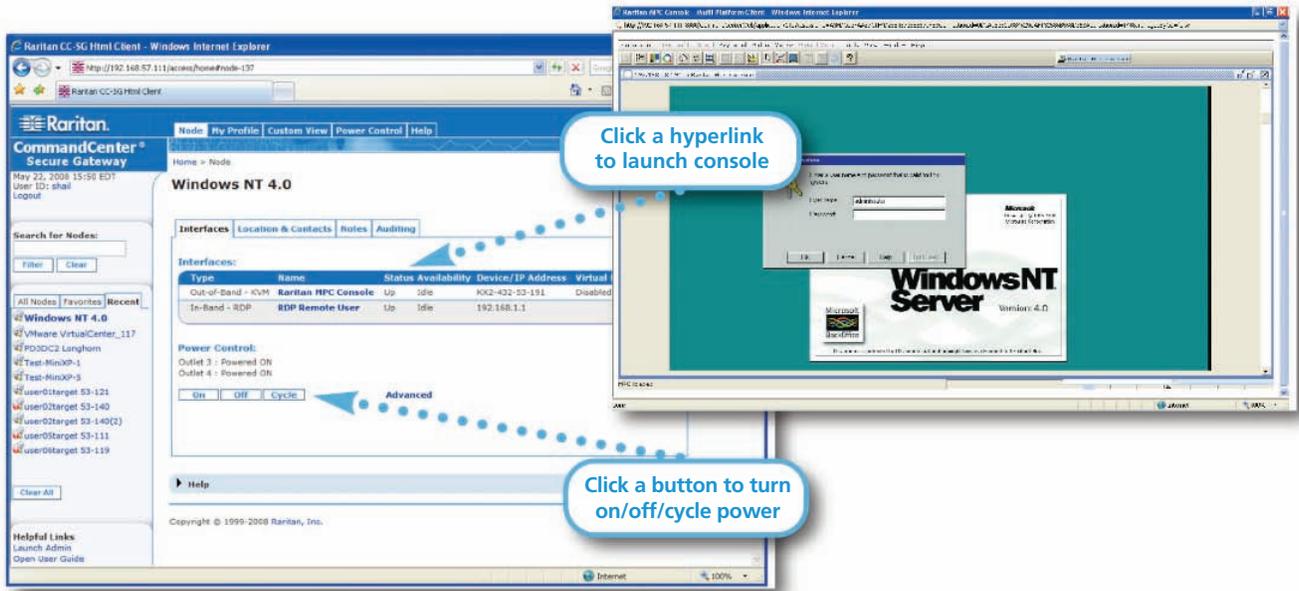
IP Address	Device Type	Device Name	Managed	Description
192.168.57.66	Dominion PX	my_device	No	Dominion PX, Model = PX (DPXR20A-30L6)
192.168.57.74	Dominion PX	my_device	Yes	Dominion PX, Model = PX (DPXR20-30L)
192.168.57.76	Dominion PX	my_device	Yes	Dominion PX, Model = PX (DPXR20-20)
192.168.57.77	Dominion PX	my_device	Yes	Dominion PX, Model = PX (DPCR20-20)
192.168.57.92	Dominion PX	my_device	No	Dominion PX, Model = PX (DPCS20A-32)
192.168.57.137	Dominion PX	192.168.57.137	No	Dominion PX, Model = PX (DPCR8-15)
192.168.57.192	Dominion PX	192.168.57.192	No	Dominion PX, Model = PX (DPCR8-15)

Discover PX

CC-SG can discover Dominion PX power strips on the IP network. Once discovered, a power strip can be added and outlet can be configured and associated to nodes.

Console and Power

CC-SG users are able to launch console as well as issue power on/off/cycle commands to servers from one screen.



to that PX. However, since the PX is a network device and requires network connectivity for data collection and alerting functions supported by it, you may be already considering allocation of an IP address to that PX.

Since integration is directly between the PX and the CC-SG, there is also no dependency on a KVM or serial console switch. Removing the dependency on the switch simplifies some of the management activities. For example, you no longer need to rely on availability of the switch in order to issue power commands to the PDU. With in-band implementation, power commands are issued from the CC-SG directly to the PDU.

On the other hand, out-of-band management of PDUs has its own advantages. Since the managed PX does not have to rely on network connectivity, power commands can be sent from the CC-SG via a managed KVM or serial console switch. While in-band implementation is encrypted and secure, out-of-band

communication to the PX is done via a physical cable and the power management passes through the KVM or serial console switch so commands are not transmitted on an IP network. Additionally, since no separate IP address is required for the PX to be connected to the CC-SG, this may be a special consideration in environments where IP addresses are scarce or environments where one IP address for an out-of-band system is desired, such as in remote office scenarios.

Summary

With CC-SG 4.0, you can now identify the most appropriate implementation for your centralized KVM, serial and power solutions. Whether it's in-band or out-of-band control of your power management environment via Raritan's centralized management solution, you can now have a better solution based on the financial, operational and security needs of your organization.

Call **1.800.724.8090** or visit Raritan.com/products/centralized-management

Raritan is a leading provider of secure IT infrastructure management solutions that provide IT directors, managers and administrators the control they need to increase data center productivity, enhance branch office operations and increase overall power management efficiency. In over 50,000 locations around the world, our integrated, secure in-band and out-of-band server access, control and power management products help companies better monitor and manage server access, utilization and energy consumption. Our intelligent PDUs offer remote power control and monitoring at the rack and device level, empowering data center owners with information to improve uptime and capacity planning, and efficiently utilize energy to save power and money. Raritan's OEM division provides embedded hardware and firmware for server and client management, including KVM over IP, IPMI, intelligent power management and other industry standards-based management applications.

Based in Somerset, N.J., Raritan has 38 offices worldwide, serving 76 countries. For more information, please visit Raritan.com

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