Energize Dell EMC VxRail Appliances with Eaton power management solutions

The ability of hyper-converged infrastructures to create a single appliance where compute, storage, networking, virtualization resources and other technologies are tightly integrated is becoming increasingly popular in data centers across the world. It allows IT professionals to reduce complexity of their IT environment, reduce risks, and eliminate the need to evaluate hardware and software individually. It also delivers a smaller footprint to reduce power and cooling costs. But imperative to the operation of all hyper-converged solutions is the underlying reliance on power infrastructure. Eaton provides intelligent, scalable solutions designed to organize, protect and manage hyper-converged infrastructures to ensure their business continuity.

Dell EMC VxRail™ Appliance powered with Eaton technology

The Dell EMC VxRail Appliance family brings together the best of Dell EMC and VMware®. This includes Dell EMC rich data services and leading systems management capabilities with VMware's leading hyper-converged software, which includes VMware vSphere®, vCenter Server® and VMware Virtual SAN™, the simple, powerful, efficient software-defined storage natively integrated with vSphere—all in a single product family with one point of support.

As an Dell EMC Technology Connect Partner Eaton helps enhance the value of VxRail Appliances by offering fully integrated, scalable infrastructure solutions including power protection, power distribution, IT racks, environmental sensors, and power management software. With Eaton's solutions, VxRail Appliance users can manage their entire IT application, including power devices, from a single dashboard, as well as ensure the integrity of valuable data and continuity of the entire business by implementing effective disaster recovery policies.

Eaton helps enhance the value of VxRail Appliances by offering fully integrated, scalable power infrastructure solutions.

Technology alliance memberships

Eaton collaborates with Dell EMC and VMware to deliver complete solutions that drive business growth.

Powering Business Worldwide

Eaton reference designs for Dell EMC VxRail appliances

VxRail appliances powering 200 VMs

	Type	Quantity	Description
A	Rack	1	Eaton 27U rack (part number REA27610SPBE)
B	ToR Switch	1	Optional ToR Switch (10GbE/1GbE recommended with IP4/IP6 Multicast)
C	HCIA	1	VxRail hyper-converged infrastructure appliance
D	UPS	1	Eaton 5PX UPS 1500 VA Netpack version, includes SNMP card (part number: 5PX1500iRTN)
E	Blanking panels	3	Eaton 1U blanking panels - 10 pcs/package (part number ETN-PBP1U10)
	Environmental sensor	1	Eaton Environmental Monitoring Probe (part number EMP001)
	Power Management Software	1	Eaton Intelligent Power Manager software version 1.54., supports unlimited licensed nodes, Gold edition (part number 66926)

VxRail appliances powering 400 VMs

	Type	Quantity	Description
A	Rack	1	Eaton 27U rack (part number REA27610SPBE)
B	ToR Switch	1	Optional ToR Switch (10GbE/1GbE recommended with IP4/IP6 Multicast)
C	HCIA	2	VxRail hyper-converged infrastructure appliance
D	UPS	1	Eaton 5PX UPS 2200 VA Netpack version, includes SNMP card (part number 5PX2200iRTN)
E	PDU	1	Eaton Horizontal Metered ePDU (part number EMIH28)
F	Blanking panels	2	Eaton 1U blanking panels - 10 pcs/package (part number ETN-PBP1U10)
	Environmental sensor	1	Eaton Environmental Monitoring Probe (part number EMP001)
	Power Management Software	1	Eaton Intelligent Power Manager software version 1.54., supports unlimited licensed nodes, Gold edition (part number 66926)

VxRail appliances powering 600 VMs

	Type	Quantity	Description
A	Rack	1	Eaton 27U rack (part number REA27610SPBE)
B	ToR Switch	1	Optional ToR Switch
C	HCIA	3	VxRail hyper-converged infrastructure appliance
D	UPS	1	Eaton 5PX UPS 3 kVA Network Ready UPS (part number 5PX3000iRTN)
E	PDU	1	Eaton Horizontal Metered ePDU (part number EMIH28)
F	Blanking panels	2	Eaton 1U blanking panels - 10 pcs/package (part number ETN-PBP1U10)
	Environmental sensor	1	Eaton Environmental Monitoring Probe (part number EMP001)
	Power Management Software	1	Eaton Intelligent Power Manager software version 1.54., supports unlimited licensed nodes, Gold edition (part number 66926)

VxRail appliances powering 800 VMs

	Type	Quantity	Description
A	Rack	1	Eaton 25U rack (part number REA27610SPBE)
B	ToR Switch	1	Optional ToR Switch (10GbE/1GbE recommended with IP4/IP6 Multicast)
C	HCIA	4	VxRail hyper-converged infrastructure appliance
D	UPS	1	Eaton 5PX 3 kVA Network Ready UPS – part number 5PX3000iRTN (4 Appliances + 1 UPS - runtime of 10-15 minutes)
E	PDU	1	Eaton horizontal Metered ePDU (part number EMIH28)
F	Blanking panels	2	Eaton 1U blanking panels - 10 pcs/package (part number ETN-PBP1U10)
	Environmental sensor	1	Eaton Environmental Monitoring Probe (part number EMP001)
	Power Management Software	1	Eaton Intelligent Power Manager software version 1.53. Support unlimited licensed nodes, Gold edition (part number 66926)

VxRail appliances powering 1600 VMs

	Type	Quantity	Description
A	Rack	1	Eaton 27U rack (part number REA27610SPBE)
B	ToR Switch	1	Optional ToR Switch (10GbE/1GbE recommended with IP4/IP6 Multicast)
C	HCIA	8	VxRail hyper-converged infrastructure appliance
D	UPS	1	9PX 8 kVA Network Ready UPS – part number 9PX8KiRTNBP
E	Blanking panels	1	Eaton 1U blanking panels - 10 pcs/package (part number ETN-PBP1U10)
	PDU	2	Eaton Vertical Metered Input PDU (part number EMIB09)
	Environmental sensor	1	Eaton Environmental Monitoring Probe (party number EMP001)
	Power Management Software	1	Eaton Intelligent Power Manager software version 1.54., supports unlimited licensed nodes, Gold edition (part number 66926)

How Eaton power management solutions adds value to VxRail Appliances

Eaton enables effective and less costly management of the power impact on overall IT performance to ensure business continuity.

Intelligent Power Manager (IPM)

Eaton's Intelligent Power Manager® (IPM) integrates with VMware vCenter to provide continuous uptime of hosts and virtual machines (VMs) through intelligent load shedding, targeted VM migration and disaster recovery initiation. To simplify power management, IPM allows you to view and manage an entire power infrastructure from an existing virtualization dashboard.

The Eaton Infrastructure Management Pack for vRealize Operations Manager enables you to monitor and manage the health, risk and efficiency of the power infrastructure within the IT environment.

Eaton is an Elite level member of VMware's Technology Alliance Partner program and its IPM software is validated VMware Ready for integration with vSphere and vCenter.

eaton.eu/intelligentpower

Uninterruptible power supply (UPS)

UPS equipment performs three vital functions in VxRail Appliance power protection strategy:

1. Notify the VxRail Appliance of utility failures or environmental alarms, causing the IPM software to initiate business continuity measures
2. Provide the emergency power needed to complete VM migrations before gracefully shutting down the appliance
3. Safeguard the VxRail Appliance from potentially hazardous power impurities

Eaton's ENERGY STAR® qualified 5PX and 9PX UPS models provide reliable, versatile and efficient backup power. External battery modules extend battery runtime.

eaton.eu/5px
eaton.eu/9px

Rack PDU

In addition to distributing power, rack PDUs enable you to:

- Benefit from remotely rebooting connected equipment and turning off unused outlets to prevent unauthorized use
- Measure the most accurate Level 2 power usage effectiveness (PUE) at the outlet level for the most accurate view of power utilization
- View and manage equipment remotely instead of being physically present in the server room or remote location

Eaton Metered and Manager ePDU® G3 models feature the most accurate view of power usage in its environment, leading to cost-saving opportunities, advanced LCD pixel display, a hot-swap meter, patent-pending IEC grip features and the ability to operate at high 60°C temperatures.

eaton.eu/epdu

Rack enclosures and cable management

Eaton racks and enclosures come in a variety of styles and sizes that can secure and maintain the integrity of hardware equipment. Tool-less blanking panels allow for quick installation and reduce re-circulation of hot exhaust air to the equipment inlet. Cable management maximizes airflow and rack organization to reduce cooling costs

eaton.eu/itrack

Environmental monitoring probe

Eaton's environmental monitoring probe delivers up-to-date temperature and humidity readings within the rack enclosures. This sensor helps automate migration of virtual machines to the cloud or backup sites based on temperature, humidity spikes and security alarm notifications.

For more information please visit
www.eaton.eu/emc

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