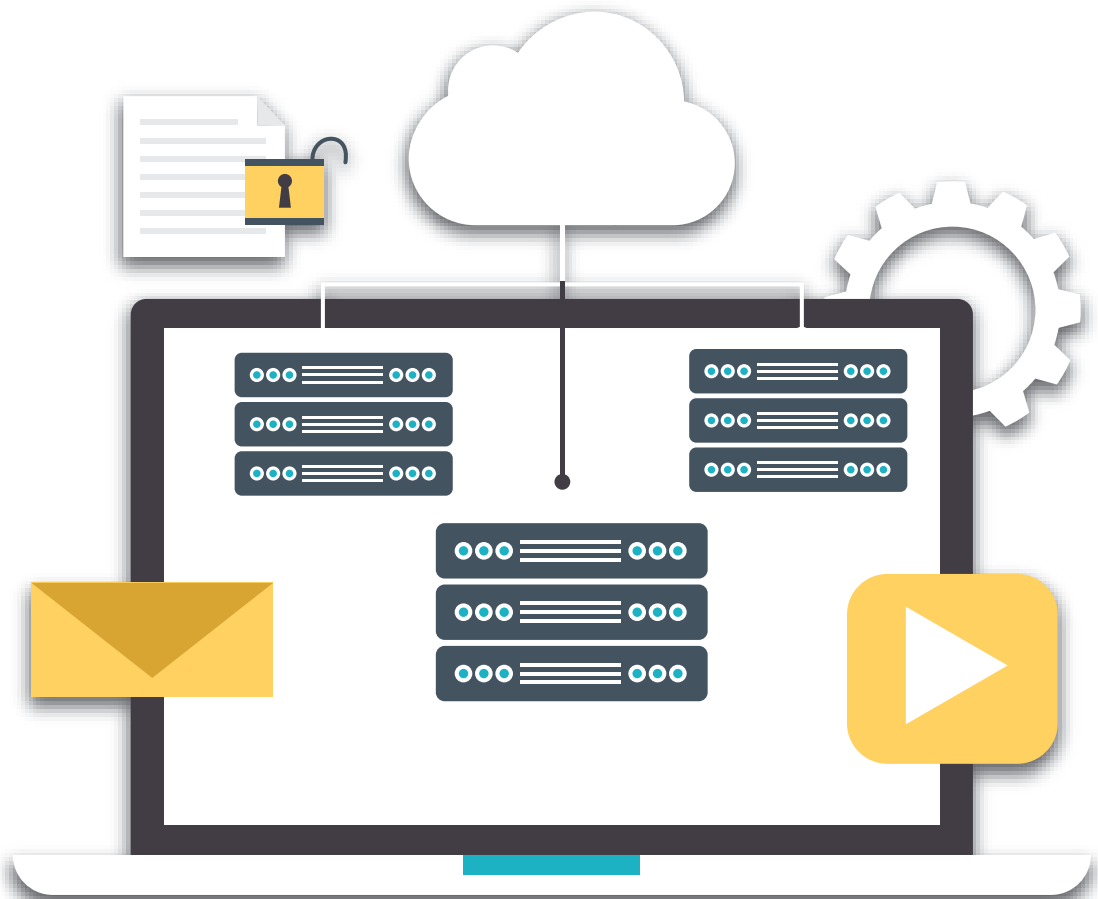# Intelligent Power Manager Editions

Understand Edition - Contextual visibility of metrics & capacity
Manage Edition - Basic monitoring & management
Optimize Edition - Advanced virtualization

![Eaton logo]

Powering Business Worldwide

www.eaton.eu/IPM

Understand Edition

IPM Understand Edition provides data center managers with an easy to use and simple to deploy infrastructure monitoring solution.

When you can see and understand the power, space and environmental constraints in your data center, it's easier to plan change, anticipate challenges and make more informed and effective management decisions.
That's the power that the Eaton Intelligent Power™ Manager (IPM) Understand Edition gives you.

From the rack view to the data center dashboard, IPM Infrastructure Understand Edition allows IT professionals to **understand and monitor data center** power, environmental and physical capacity metrics, all within the context of their IT infrastructure.

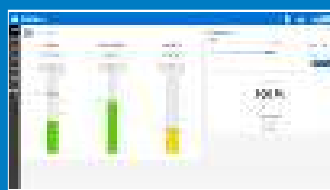IPM Understand Editions supports Eaton power devices out of the box, and is based on the 42ITy™ open source project, enabling us to **provide vendor-neutral data acquisition** via the NUT open source engine (www.networkupstools. org). **Multi-vendor device support** is provided via the SNMP protocol. Eaton IPM Understand Edition simplifies complexity so **you can focus on what really matters**.

New Grafana Dashboard

Eaton Graphite connector is available with the IPM Understand Edition.

It enables you to monitor & control all sites in real time from a single **open source Grafana dashboard** through the aggregation of vendor aganostic critical infrastructure data.
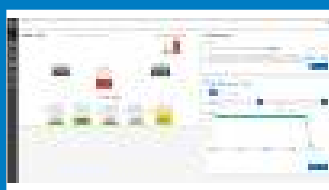
Application highlights

Data Center Dashboard:
Understand your data center. All the key KPIs you need for peace of mind.
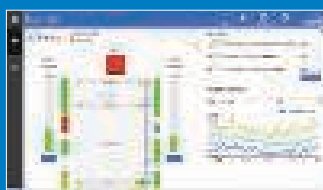
- Total DC energy consumption
- Data Center Temperature
- Data Center Humidity
- Power availability KPI
- Trends on all KPIs
- Alert summary

Data Center Power Chain view:
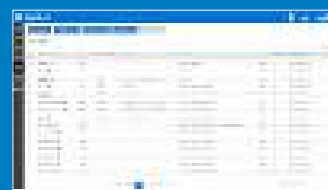Master your critical power consumption and extrapolate future usage trends.

- Simplified power chain
- UPS overview including phase detail
- Total power consumption per rack
- Total critical power consumption
- Historical power trend graph
- Alert summary

Rack level:
Where IT and Power meet. Understand the intersection of power and physical capacity at a glance.

- Available capacity – outlet and U space
- Installed devices
- Total rack power consumption
- Power consumption per rack PDU
- Feed balance
- Outlet identification per device
- Historical power trend graph
- Alert summary

Simplified asset management:
Manage the lifecycle of your IT devices.

- Installed devices
- Contact details per device
- Business priority per device
- Simple alert notification per device
- Warranty details per device with alert capability
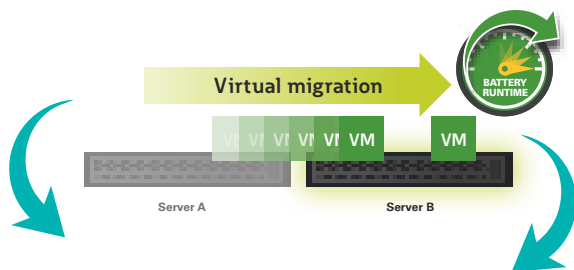- Import / Export to .csv

Manage Edition - Optimize Edition

IPM Manage and Optimize Editions bridge the gap between physical power infrastructure and virtual IT.

Eaton Intelligent Power® Manager (IPM) Manage and Optimize Editions integrate seamlessly with your power hardware to provide unparalleled business continuity capabilities. Both Editions manages all network connected power infrastructure devices, including UPSs and rack based power distribution units (ePDU®s), triggers virtual machine migration plans and shuts down non-essential devices in order to keep your business running during power and environmental events.

Ensure business continuity

Virtual migration

BATTERY RUNTIME

Server A   Server B

Automate business continuity

with flexible policies based on physical infrastructure events, including power and environmental conditions.

Define and execute sequential load shedding or disaster recovery policies for a VM, a vApp, or groups of VMs/vApps from directly within Intelligent Power Manager.

Workload management

Remotely and gracefully shut down servers and select storage devices during a power event.

Prioritise and shed non-critical loads to extend runtime during an extended power outage.

Trigger VMware vMotion, Citrix XenMotion and other migration applications to transparently move virtual machines to an available server on the network.
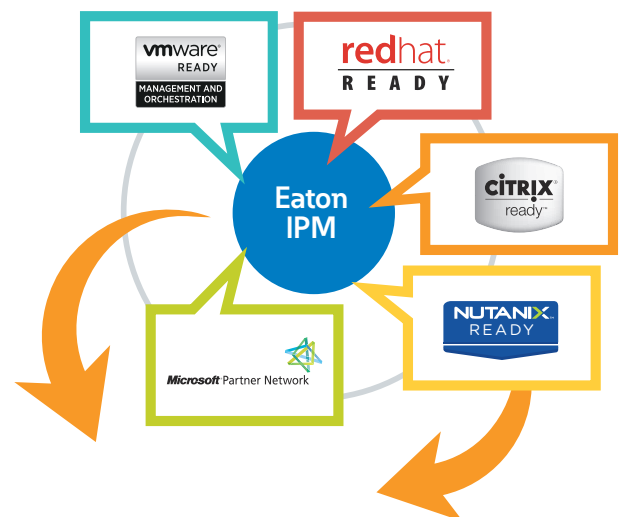
Failover

Trigger VMware Site Recovery Manager disaster recovery plans during a power outage.

Power capping

Keep critical workloads running longer during a power outage by limiting server power consumption.

Improve efficiencies and lower costs

System integration

Simplify setup and reduce the learning curve by conveniently integrating into existing virtual management systems, allowing you to spend time performing other critical tasks.

Remote agentless host management

Conserve valuable time when remotely shutting down servers by eliminating the need for agents that consume resources and slow performance.

Install Eaton IPM Optimize Edition and Infrastructure Management Pack for VMware vRealize® to manage the health, risk and efficiency of your power devices through vRealize.

Download at **www.eaton.com/downloads**

Licensing & Accessories

Understand Edition 3 steps to find the best option for you

1

Understand Edition	Physical appliance	Software only Virtual Appliance (OVA)
Deployments up to	10 racks; 20 PDUs	150 racks; 300 PDUs

2

Licensing options		
IPC 3000 Appliance		na
Software subscription	✔	✔
Perpetual license + maintenance options	✔	✔

3a

Subscription options: 1 year Subscription or 5 years subscription		
Subscription description	**Part number (Physical appliance)**	**Part number (OVA)**
IPM Infra - IPC3000: 1 yr Subs,5 power devices	INF-U-S1-05	INF-U-S1-05
IPM Infra - IPC3000: 5 yr Subs, 5 power devices	INF-U-S5-05	INF-U-S5-05
IPM Infra - IPC3000: 1 Yr Subs, 15 power devices	INF-U-S1-15	INF-U-S1-15
IPM Infra - IPC3000: 5 Yr Subs, 15 power devices	INF-U-S5-15	INF-U-S5-15
IPM Infra - IPC3000: 1 yr Subs, 25 power devices	INF-U-S1-25	INF-U-S1-25
IPM Infra - IPC3000: 5 yr Subs, 25 power devices	INF-U-S5-25	INF-U-S5-25
IPM Infra - OVA: 1 yr Subs, 35 power devices		INF-U-S1-35
IPM Infra - OVA: 5 yr Subs, 35 power devices		INF-U-S5-35
IPM Infra - OVA: 1 yr Subs, 55 power devices		INF-U-S1-55
IPM Infra - OVA: 5 yr Subs, 55 power devices		INF-U-S5-55
IPM Infra - OVA: 1 yr Subs, 105 power devices		INF-U-S1-105
IPM Infra - OVA: 5 yr Subs, 105 power devices		INF-U-S5-105
IPM Infra - OVA: 1 yr Subs, 200 power devices		INF-U-S1-200
IPM Infra - OVA: 5 yr Subs, 200power devices		INF-U-S5-200
IPM Infra - OVA: 1 yr Subs, 300 power devices		INF-U-S1-300
IPM Infra - OVA: 5 yr Subs, 300 power devices		INF-U-S5-300
IPM Infra - Grafana add-on, up to 300		INF-G-L-ANY

3b

Perpetual License* for a given number of power devices Combined with a Maintenance entitlement (same number of power devices) 1 and 5 year maintenance options		
License & Maintenance description	**Part number (Physical appliance)**	**Part number (OVA)**
IPM Infra - IPC3000: License, 5 power devices	INF-U-L-05	INF-U-L-05
IPM Infra - IPC3000: 1 yr Maint., 5 power devices	INF-U-M1-05	INF-U-M1-05
IPM Infra - IPC3000: 5 yr Maint., 5 power devices	INF-U-M5-05	INF-U-M5-05
IPM Infra - IPC3000: License, 15 power devices	INF-U-L-15	INF-U-L-15
IPM Infra - IPC3000: 1 Yr Mnt., 15 power devices	INF-U-M1-15	INF-U-M1-15
IPM Infra - IPC3000: 5 Yr Mnt., 15 power devices	INF-U-M5-15	INF-U-M5-15
IPM Infra - IPC3000: License, 25 power devices	INF-U-L-25	INF-U-L-25
IPM Infra - IPC3000: 1 yr Mnt., 25 power devices	INF-U-M1-25	INF-U-M1-25
IPM Infra - IPC3000: 5 yr Mnt., 25 power devices	INF-U-M5-25	INF-U-M5-25
IPM Infra - OVA: License, 35 power devices		INF-U-L-35
IPM Infra - OVA: 1 yr Maint., 35 power devices		INF-U-M1-35
IPM Infra - OVA: 5 yr Maint., 35 power devices		INF-U-M5-35
IPM Infra - OVA: License, 55 power devices		INF-U-L-55
IPM Infra - OVA: 1 yr Maint., 55 power devices		INF-U-M1-55
IPM Infra - OVA: 5 yr Maint., 55 power devices		INF-U-M5-55
IPM Infra - OVA: License, 105 power devices		INF-U-L-105
IPM Infra - OVA: 1 yr Mnt., 105 power devices		INF-U-M1-105
IPM Infra - OVA: 5 yr Mnt., 105 power devices		INF-U-M5-105
IPM Infra - OVA: License, 200 power devices		INF-U-L-200
IPM Infra - OVA: 1 yr Mnt., 200 power devices		INF-U-M1-200
IPM Infra - OVA: 5 yr Mnt., 200 power devices		INF-U-M5-200
IPM Infra - OVA: License, 300 power devices		INF-U-L-300
IPM Infra - OVA: 1 yr Mnt., 300 power devices		INF-U-M1-300
IPM Infra - OVA: 5 yr Mnt., 300 power devices		INF-U-M5-300
IPM Infra - Grafana add-on, up to 300		INF-G-L-ANY

* a minimum of 1 year of maintenance is mandatory with the purchase of a Perpetual License.

Licensing & Accessories

Understand Edition Accessories & Trial Licenses

Product Code	Description	Image
EMPDT1H1C2	**Environmental Monitoring Probe,(EMP) Gen 2** Get live measurement on temperature, humidity, set threshold and be notified in real time	■
DCS001	Door contact sensor	■
WLD012	Water leak detector	■
VIB001	Vibration detector	■
M12	Smoke detector	■
XCELW	PIR motion detector	■

Want to give a try?

Trial Licences - description	Part number (Physical appliance)	Part number OVA
IPM Infra IPC 3000 60 days trial, 25 power devices	INF-U-T-25	
IPM Infra - OVA 60 days trial, 300 power devices		INF-U-T-300

Manage Edition

Licensing options	Software Virtual Appliance (OVA)
Perpetual license	✔
License & Power devices description	**Part number (OVA)**
Free Download License, 10 power devices	IPM-ML-10
IPM IT Manage License, 15 power devices	IPM-ML-15
IPM IT Manage License, 25 power devices	IPM-ML-25
IPM IT Manage License, 35 power devices	IPM-ML-35
IPM IT Manage License, 50 power devices	IPM-ML-50
IPM IT Manage License, 100 power devices	IPM-ML-100
IPM IT Manage License, 200 power devices	IPM-ML-200
IPM IT Manage License, 300 power devices *	IPM-ML-300
IPM IT Manage License, 400 power devices *	IPM-ML-400
IPM IT Manage License, 500 power devices *	IPM-ML-500

*IPM can monitor a limited number of metrics. If you want to monitor UPS or monitored input ePDUs, this license is applicable.
If you want to monitor managed or metered outlet ePDUs IPM may support reduce number of power devices.

Optimize Edition

Licensing options	Software Virtual Appliance (OVA)
Perpetual license	✔
License & Power devices description	**Part number (OVA)**
IPM IT Optimize License, 5 power devices	IPM-OL-05
IPM IT Optimize License, 10 power devices	IPM-OL-10
IPM IT Optimize License, 15 power devices	IPM-OL-15
IPM IT Optimize License, 25 power devices	IPM-OL-25
IPM IT Optimize License, 35 power devices	IPM-OL-35
IPM IT Optimize License, 50 power devices	IPM-OL-50
IPM IT Optimize License, 100 power devices	IPM-OL-100
IPM IT Optimize License, 200 power devices	IPM-OL-200
IPM IT Optimize License, 300 power devices *	IPM-OL-300
IPM IT Optimize License, 400 power devices *	IPM-OL-400
IPM IT Optimize License, 500 power devices	IPM-OL-500

*IPM can monitor a limited number of metrics. If you want to monitor UPS or monitored input ePDUs, this license is applicable.
If you want to monitor managed or metered outlet ePDUs IPM may not support the full licensed quantity of power devices.

Intelligent Power Manager Editions capability comparison

Intelligent Power Manager (IPM) comes in three editions:

The Understand Edition allows operators of IT rooms and data centres to understand and monitor power, environmental and physical capacity metrics. Plan changes, anticipate challenges and make intelligent management decisions to optimise efficiency and ensure business continuity.

The Manage Edition provides the tools needed to manage and update power devices and to define basic business continuity policies with host level actions in your physical or virtual IT environment.

The Optimize Edition provides the most complete set of capabilities for implementing power management strategies in virtual and hybrid environment. In addition to the Manage Edition feature set, IPM Optimize includes the ability to define advanced business continuity policies with VM level actions as well as to monitor third-party UPSs and trigger business continuity policies from 3rd party UPS events (RFC 1628 MIB).

Trial Licenses are available upon request. Please contact your local Eaton account representative or support team to obtain a trial license.

Features	Understand	Manage	Optimize	Benefits & Details
Contextual visibility of power metrics and constraints				**Enable IT administrators to easily understand key power and environmental constraints within the context of their IT environment.**
Dashboard view	✔			Visibility of data center level composite metrics and alarms including : - Power usage, 24 hour, 7 day and 30 day usage trends - Active alarms panel - Data center uptime metric
Data center view	✔			Power chain overview including : - Rack level power usage composite metrics - Data center topology with rack, row, & room level grouping - Calculated data center phase balance for 3 phase deployments - Active alarms panel - Total data center power consumption graph with preset and custom periods
Rack view	✔			Rack view - where IT and Power meet : - Total rack consumption composite metric - Feed balance visualisation - Outlet and outlet group level monitoring (with MO & MA rack PDUs) - Active alarms panel - Total rack power consumption graph with preset and custom periods
Environmental view	✔			Environmental view including: - rack average input temperature & humidity composite metrics - row average input temperature & humidity composite metrics - data center average input temperature & humidity composite metrics
Asset management	✔			Simple asset management including: - Asset create/modify/delete - Data center topology & power chain management - Deployment date - Battery installation, maintenance & warranty expiration tracking
Monitoring of Eaton & many 3rd party power devices				**Single pane of glass solution for power infrastructure & environmental monitoring as well as for business continuity plan implementation in heterogeneous data center environments**
Eaton UPSs, rack PDUs & ATSs	✔	✔	✔	Contextual visibility or device centric monitoring depending on Edition
3rd party UPSs, rack PDUs & ATSs	✔[1]	✔[2]	✔[2]	Monitor 3rd party devices and define business continuity policy triggers from select 3rd party UPSs
Manage & update Eaton power devices				**Simplify configuration management across the network for large installed base deployments of Eaton power devices**
Mass configure Eaton power devices		✔	✔	Deploy common configuration settings across multiple Eaton power devices
Mass upgrade Eaton power devices		✔	✔	Upgrade UPS card firmware over the network
Core Power Management Features				**Automate protection of your IT environment**
Protected Servers (via IPP agent) and Virtual Hosts (agentless)		✔	✔	Gracefully shutdown servers
Storage Shutdown Module		✔	✔	Remotely shutdown select storage devices
Generic Drivers and Third Party Devices		✔	✔	Monitor 3rd party devices via a generic SNMP driver
Configuration Policy		✔	✔	Create power & environmental event business continuity policies for groups of devices
Control PDU outlets		✔	✔	Enable policy based control of ePDU outlets
Advanced Event Action with Standard Events		✔	✔	Use standard power events in configuration policies
Advanced Event Action with Custom Events			✔	Use custom user defined events in configuration policies
Generic SSH action			✔	Easily configure custom actions on any SSH enabled device

Features	Understand	Manage	Optimize	Benefits & Details
Define basic virtual infrastructure business continuity policies with host level actions				**Protect virtualization hosts simply with host level business continuity actions**
Basic Power Actions				
Shutdown Storage Devices		✔³	✔	Perform basic graceful shutdown actions in business continuity policies by shutting down virtual machines, virtual hosts, shutting down select storage devices and/or by entering/exiting maintenance mode.
Shutdown Virtual Hosts		✔³	✔	
Shutdown Virtual Machines (all, no prioritization in IPM policy)		✔³	✔	
Enter/Exit Maintenance Mode		✔³	✔	
Define advanced virtual infrastructure business continuity policies with VM and cluster level actions				**Protect and keep critical applications running longer with host and VM level load shedding in your business continuity policies**
Includes all basic power actions listed above plus the following:				
Advanced Power Actions for VM/Volume				
Load shedding			✔	Reduce power load by integrating policy driven VM load shedding into your business continuity policies
Shutdown Targeted Virtual Machines			✔	Target a specific VM or groups of VMs for shutdown and/or migration in load shedding policies
Migrate Virtual Machines to Targeted Hosts			✔	
Automatic VM group assignment			✔	
Advanced Power Actions for Hosts				
Shutdown VMware vApp			✔	Target VMware vApps for shutdown in load shedding policies
Automate VMware SRM Recovery Plan			✔	Automatically trigger the execution of your VMware SRM Recovery Plan when runtime hits a predefined threshold.
Virtual IT Cluster Level				
Fully virtualized cluster shutdown			✔	Enable 100% safe shutdown and restoration of VMs and host servers in high availability clustered environments
VMware vSAN shutdown			✔	
Nutanix Acropolis shutdown			✔	
Plugins & 3rd party IT solution connectors				**Integrate your power infrastructure with leading virtualization and IT vendor solutions**
Virtualisation management plugins				
Plugin for VMware vCenter		✔³	✔	Integrate power management into your virtualization environment
Plugin for Citrix XenCenter		✔³	✔	
Connectors				
VMware vCenter		✔³	✔	Create business continuity policies to protect your vCenter clusters
VMware ESXi		✔³	✔	Create business continuity policies to protect individual ESXi servers
Microsoft Hyper-V		✔³	✔	Create business continuity policies to protect Hyper-V servers or clusters
Citrix XenCenter		✔³	✔	Create business continuity policies to protect XenCenter environments
Citrix XenServer Pool		✔³	✔	Create business continuity policies to protect XenServer Pool clusters
NetApp Storage		✔³	✔	Trigger the shutdown of NetApp storage devices in your business continuity policies
OpenStack			✔	Power optimize the placement of VMs in Ubuntu OpenStack environments
HPE OneView			✔	Create business continuity policies to power cap HPE servers or groups of servers via OneView & iLO
Nutanix Acropolis			✔	Create business continuity policies to protect Nutanix Acropolis clusters
Cisco UCS Manager			✔	Dynamically power cap Cisco UCS devices in your business continuity policies
Management Packs				
Eaton IPM Management Pack for VMware vRealize Operations Manager			✔	Monitor and analyze power information directly from within VMware vRealize

1 Missing device drivers for supported 3rd party device types are eligible for Eaton Xtreme Support. Some limitations apply.
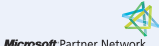
2 3rd party UPS monitoring require support by the device for the IETF MIB RFC 1628.

3 3rd party UPS monitoring with host level business continuity policy features require an Optimize Edition license and support by the device for the IETF MIB RFC 1628.

Eaton Partnerships to empower you

Eaton partners with the industry's leading IT providers to manage power more efficiently and effectively—a distinct competitive advantage. These validated power management solutions are designed to integrate easily with technology from our alliance partners, helping solve your unique business needs and propel growth.

Eaton solutions organize, protect and manage your IT environment by delivering a complete power management solution—including racks, UPSs, rack PDUs and software—designed to save you time, save you money and reduce risk. As the important fifth element of converged and hyperconverged infrastructures, Eaton's relationships with partners like VMware, Cisco, NetApp, Dell, HPE, Nutanix and Scale Computing provide added value by extending the availability of your IT infrastructures.

Alliance program	Partner Product	Integration	Validation	What Eaton Offers
VMware	vCenter, vRealize Operations, Site Recovery Manager, vSAN	Power mgmt via IPM plug-in to vCenter Infrastructure Management Pack for vRealize		• Eaton Intelligent Power Manager Manage & Optimize Edition seamlessly integrates into VMware's vCenter dashboard and vRealize Operations Manager letting you manage power to your virtual environment, ensuring business continuity.
Microsoft	Microsoft HyperV	IPM integration with HyperV		• Eaton IPM Manage & Optimize Editions allow you to gracefully shutdown your Microsoft virtual environment.
Dell EMC	VxRail, XC series, VxBlock, XC (with Nutanix)	IPM integration with VMware Power capping (Vblock)		• Eaton products are part of the Software and Peripherals offering • Currently working on IPM integration with VxRail Manager • Vblock Ready status
HPE	OneView, SimpliVity 380, Composable Infrastructure, Synergy	Power capping, spatial relationship with OneView IPM integration with VMware		• IPM Optimize Edition integration with HPE OneView • Full integration & management of HPE UPSs • Lab-tested IPM integration with HPE SimpliVity
NetApp	FlexPod, FlexPod Modular Integration, Managed Edge Cloud, NetApp HCI	IPM integration with VMware		• IPM Manage & Optimize Editions enable graceful shutdown of select Netapp FAS storage systems.
Nutanix	NX, SX, HX (with Lenovo), XC (with Dell), Prism, Acropolis AHV on Cisco AHV on HPE	Acropolis for VM, cluster and AHV shutdown, connector to Prism IPM integration with VMware		• Nutanix AHV Ready validation for IPM Optimize Edition which demonstrates a direct integration with the Nutanix Acropolis Hypervisor
DataCore	DataCore Software-Defined Storage infrastructures	Eaton IPM Optimize Edition		• Eaton IPM Optimize Edition allows you to gracefully shutdown your DataCore Software defined Storage infrastructures.

eaton.com/data-center

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