

Infrastructure Management Pack for vRealize Operations Manager

Purpose of the article

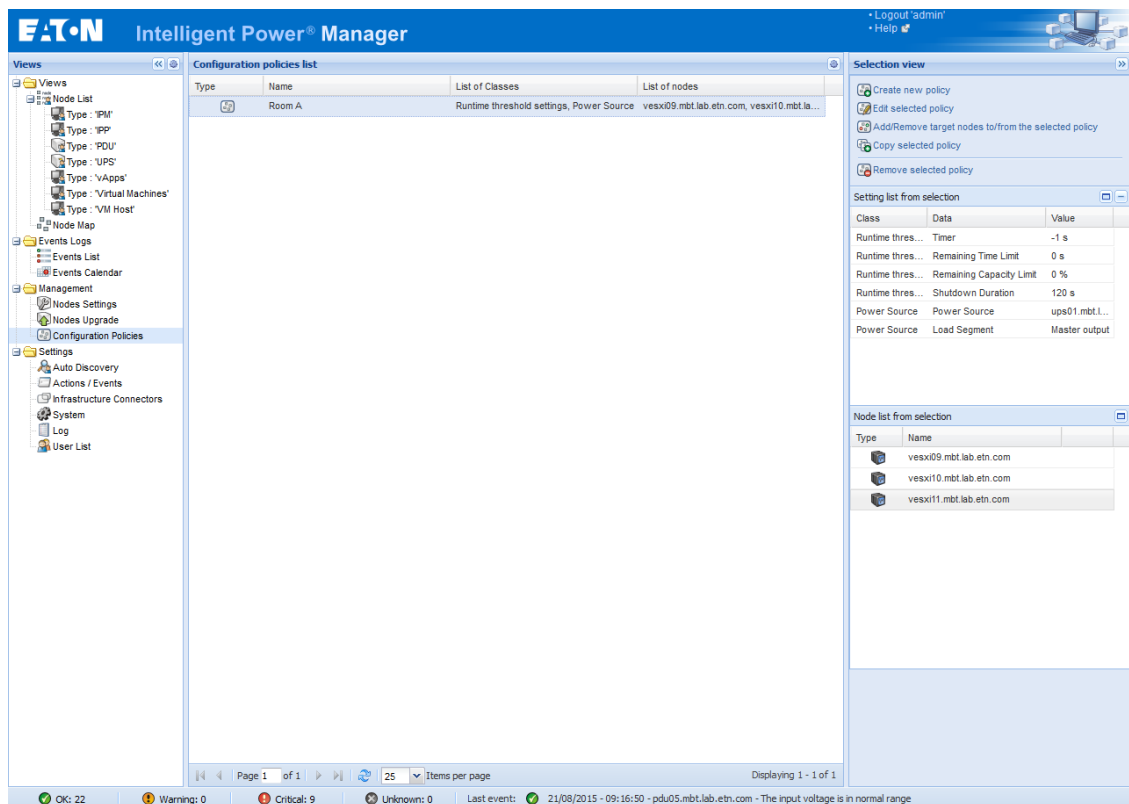
The following article describes how to use Eaton Infrastructure Management Pack (MP) for vRealize Operations Manager 1.0

Pre-requisite

- VMware vRealize Operations Manager server running with
 - Licenses
- IPM running with
 - UPSes
 - vCenter connector configured
 - Policy defined
 - Gold or Silver license
- Eaton MP downloaded (.pak)

The screenshot displays the Eaton Intelligent Power Manager web interface. The top navigation bar includes the Eaton logo, the product name "Intelligent Power Manager", and user options "Logout admin" and "Help". A left-hand navigation pane lists various views: Views, Node List, Events Logs, Management, Settings, Infrastructure Connectors (selected), System, Log, and User List. The main content area is titled "Infrastructure Connectors" and contains a table with columns for Hostname or IP address, Plugin, Conn., and Product. The table is divided into two sections: "Product: New VMware vCenter (1 Item)" and "Product: VMware ESX/ESXi through vCenter (3 Items)". The first section shows a single entry for "vcenter04.mbt.lab.etn.c..." with a green status icon. The second section shows three entries for "vesxi09.mbt.lab.etn.com", "vesxi10.mbt.lab.etn.com", and "vesxi11.mbt.lab.etn.com", all with green status icons. On the right side of the main area, there is a vertical toolbar with buttons for "Add a connector", "Edit connector", "Remove connector", "Test shutdown", "Upgrade connector", and "Create Shutdown Policy". At the bottom of the interface, a status bar shows system health: "OK: 22", "Warning: 0", "Critical: 9", "Unknown: 0", and a "Last event" log entry dated "21/08/2015 - 09:16:50" with the message "pdu05.mbt.lab.etn.com - The input voltage is in normal range".

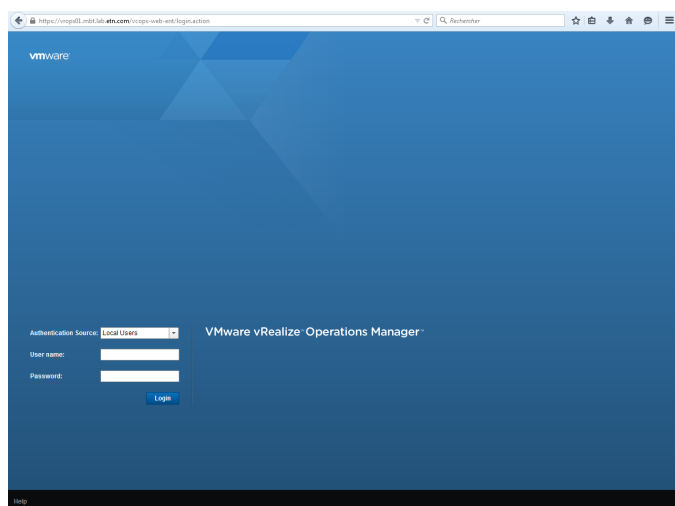
Hostname or IP address...	Plugin...	Conn...	Product
Product: New VMware vCenter (1 Item)			
vcenter04.mbt.lab.etn.c...			New VMware vCenter
Product: VMware ESX/ESXi through vCenter (3 Items)			
vesxi09.mbt.lab.etn.com			VMware ESX/ESXi through vCenter
vesxi10.mbt.lab.etn.com			VMware ESX/ESXi through vCenter
vesxi11.mbt.lab.etn.com			VMware ESX/ESXi through vCenter



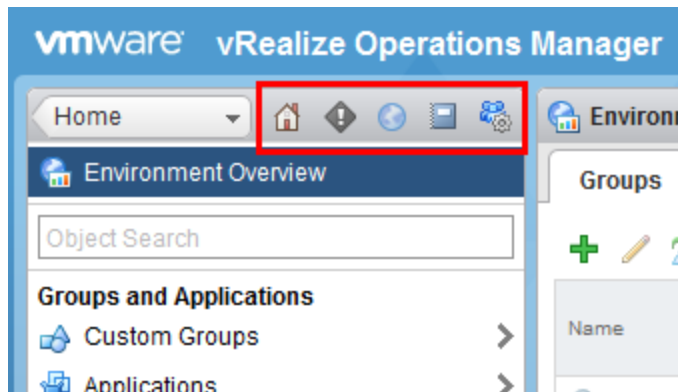
Step by step guide

Connect on VMware vRealize Operations Manager

- Use the Web interface

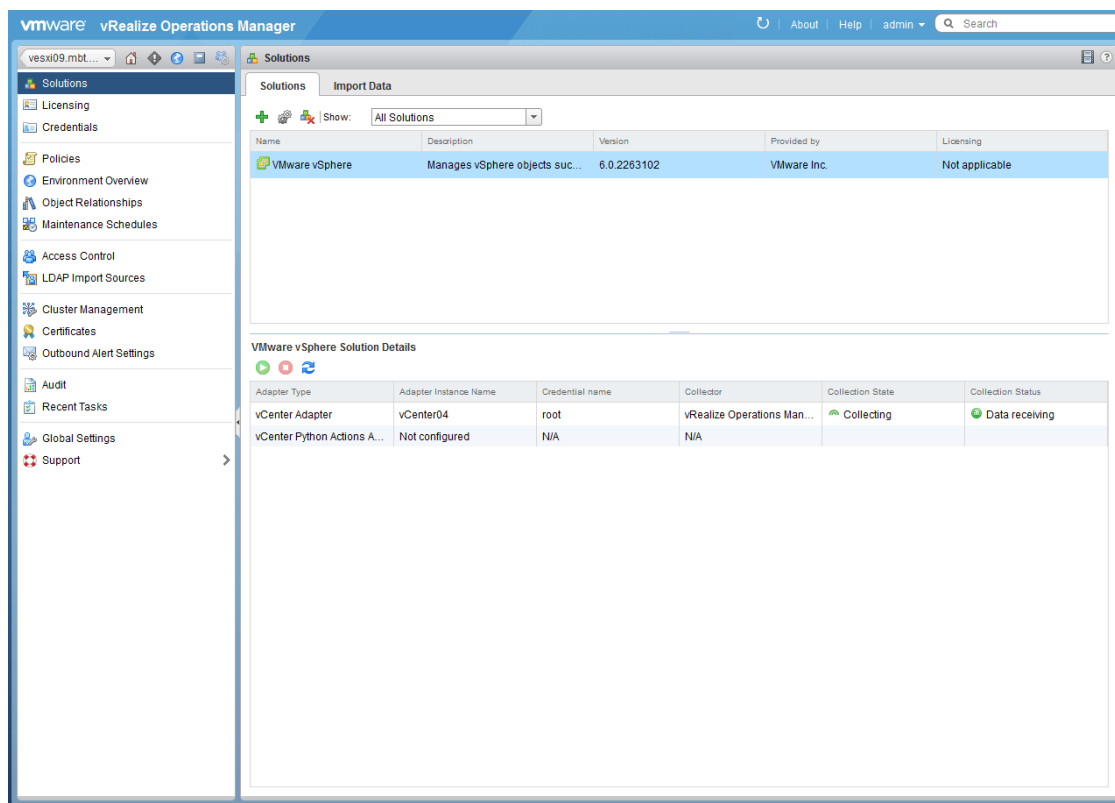


The way to go in the different section is through the "Tab"



Install the management pack (MPs)

1. Go to "Administration" => "Solutions"
2. Click on "Add" (green cross)
3. Browse and select the MP
4. Upload



Configure the solutions

1. Select the solution
2. Click on "configure"
3. Add a new instance
4. Configure as your needs
5. Do for both VMware and Eaton

Once the solutions installed and configured, the discovery process will start (if checked) and the monitoring part will start every 5 minutes (default value)

Configure the content

After the installation of the MP, you can modify all the symptoms, alarms, icons, dashboard, actions, recommendations in the content panel.

You can easily access the IPMAdapter alert with the filter on "Adapter Type" on "IPM"

The first screenshot shows the 'Alert Definitions' page in vRealize Operations Manager. A table lists various alerts, including 'A fatal error occurred on a PCIe bus during system reboot', 'A total memory error was detected at system boot time', and 'A PCIe error occurred during system boot, but the error is recoverable'. A 'Select Adapter Type' dialog box is open, showing 'IPM' as the selected adapter type. The second screenshot shows the same 'Alert Definitions' page with the 'Adapter Type' filter set to 'IPM'. The table now displays only IPM-related alerts, such as 'AlertDefinition-IPMAdapter-AlertDefinition-IPMAdapter-UPSNotification', 'Load High', 'Load Low', 'On Battery', 'Over Load', 'Remaining Time Low', and 'Remaining Time Very Low'.

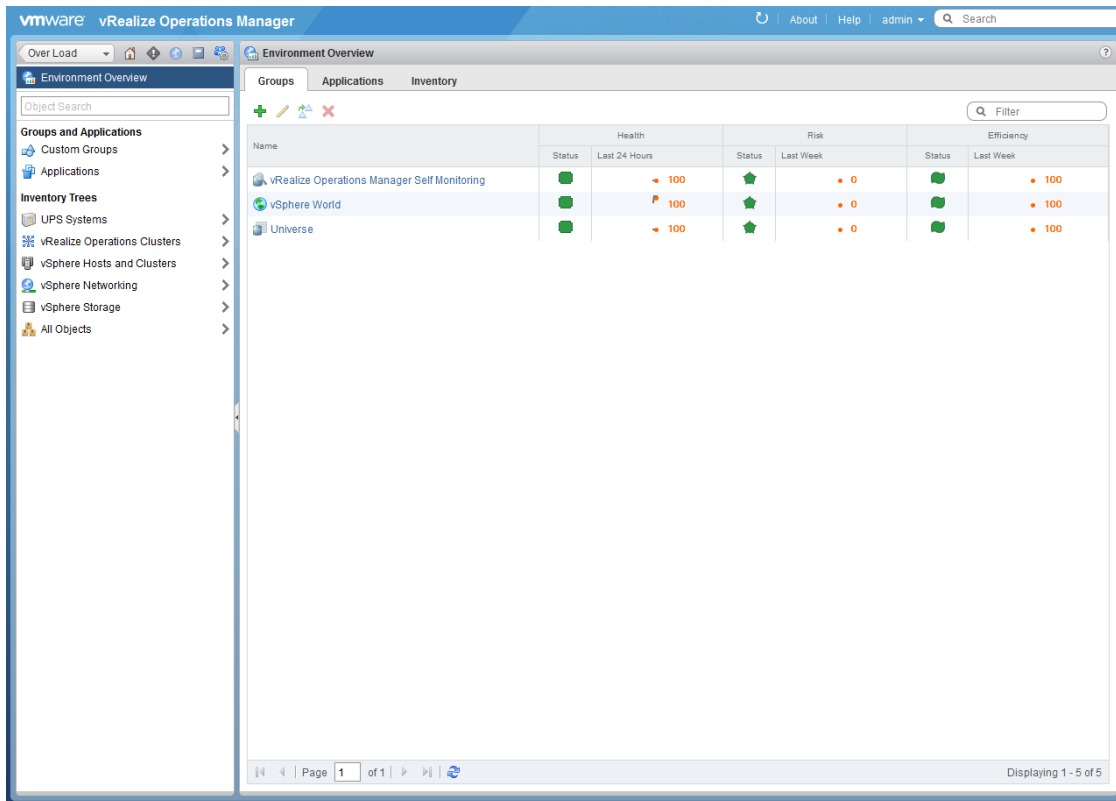
Name	Adapter Type	Object Type	Alert Type	Alert Subtype	Criticality	Impact	Defined By
A fatal error occurred on a PCIe bus during system reboot	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
A total memory error was detected at system boot time	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
A node may be down and it is failing to report any objects. This is disabled. It will impact performance and cause some operations to fail.	vRealize Operations Adapter	vRealize Operations Cluster	Application	Performance	High	Health	vRealize Operations Adapter
A PCIe error occurred during system boot, but the error is recoverable	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
A problem occurred with a vCenter component	vCenter Adapter	Virtualization...	Virtualization...	Availability	High	Health	vCenter Adapter
A recoverable memory error has occurred on the host	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
A storage device for a datastore is to be off	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
Adapter instance object has on...	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
AlertDefinition-IPMAdapter-AlertDefinition-IPMAdapter-UPSNotification	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Health	IPM Adapter
Baseboard Management Controller sensors are reporting problems	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
Battery sensors are reporting problems	vCenter Adapter	Host System	Hardware (OS)	Availability	High	Health	vCenter Adapter
Collector clock is not synchronized with the main server	vRealize Operations Adapter	vRealize Operations Cluster	Application	Performance	High	Health	vRealize Operations Adapter
Data migration from vCenter Operations Manager 5.x system has failed	vRealize Operations Adapter	vRealize Operations Cluster	Application	Availability	High	Health	vRealize Operations Adapter
Database storage capacity is running low for the vRealize Operations Manager Cluster	vRealize Operations Adapter	vRealize Operations Cluster	Application	Performance	High	Health	vRealize Operations Adapter
Datastore has lost connectivity to a storage device	vCenter Adapter	Datastore	Storage	Availability	High	Health	vCenter Adapter

Name	Adapter Type	Object Type	Alert Type	Alert Subtype	Criticality	Impact	Defined By
AlertDefinition-IPMAdapter-AlertDefinition-IPMAdapter-UPSNotification	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Health	IPM Adapter
Load High	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Risk	IPM Adapter
Load Low	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Efficiency	IPM Adapter
On Battery	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Health	IPM Adapter
Over Load	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Health	IPM Adapter
Remaining Time Low	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Risk	IPM Adapter
Remaining Time Very Low	IPM Adapter	UPS System	Hardware (OS)	Availability	High	Risk	IPM Adapter

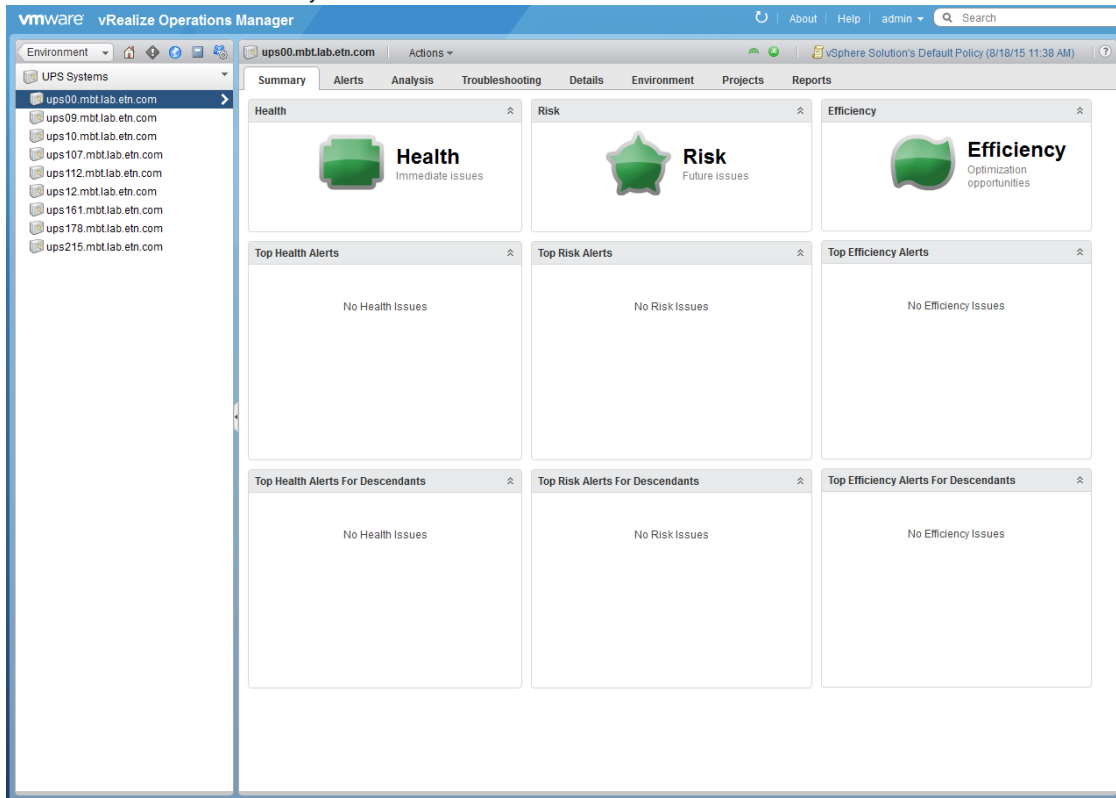
You can modify the name and the configuration regarding your needs.

Check the UPS discovered and the data

1. Select "Environment"

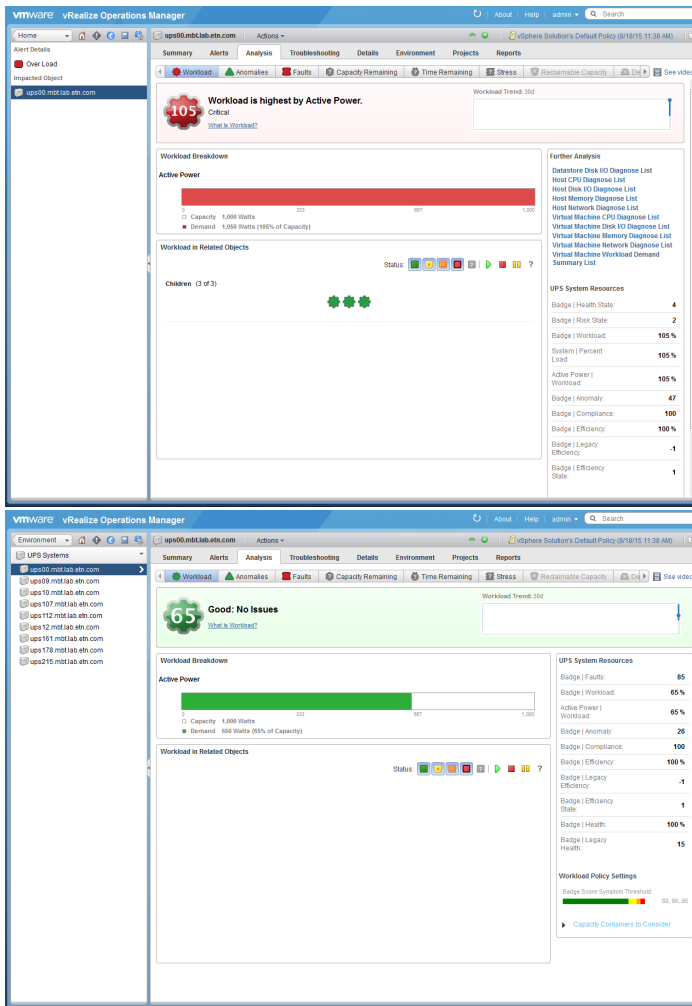


2. Go in "UPS Systems"
3. Select a UPS to see the summary



4. You will see different tabs
 - a. Alerts is the list of the alerts
 - b. Analysis will show the data computed

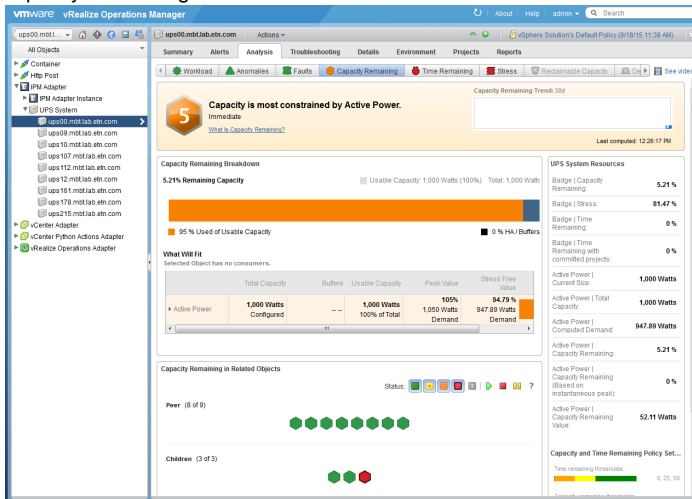
i. Workload

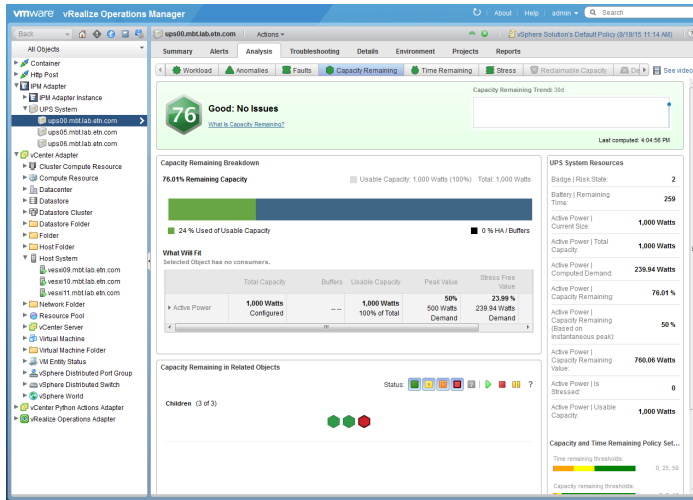
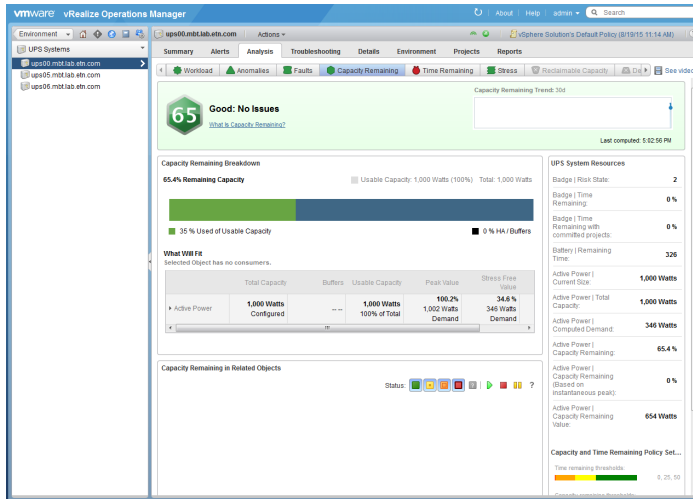


ii. Anomalies

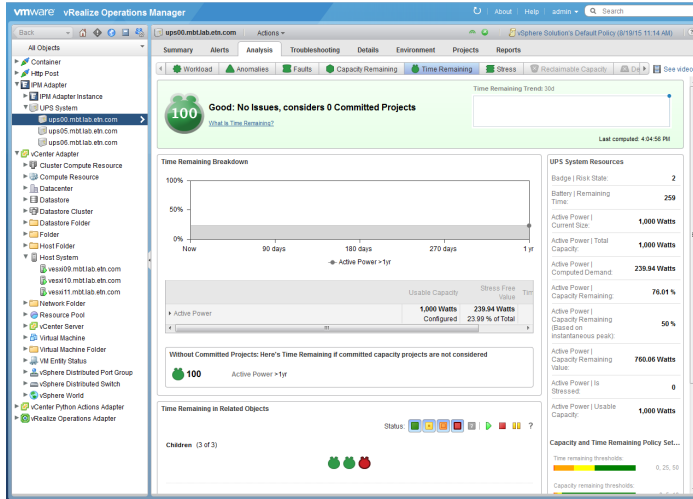
iii. Faults

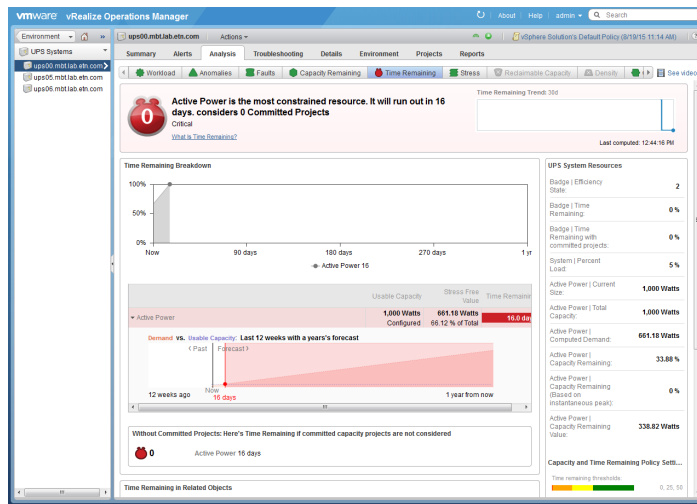
iv. Capacity Remaining



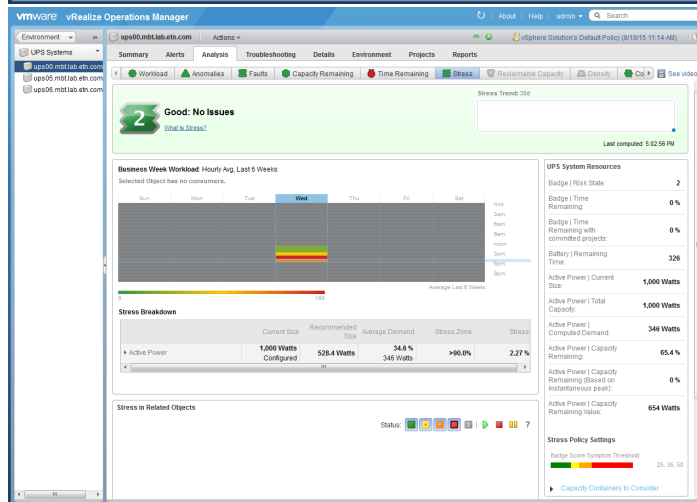
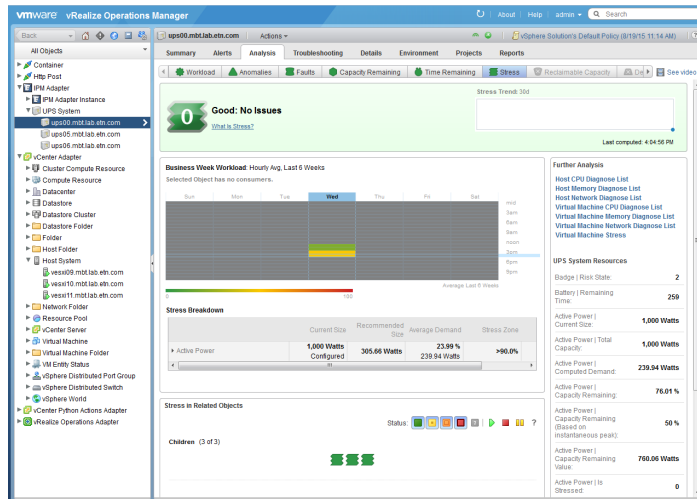


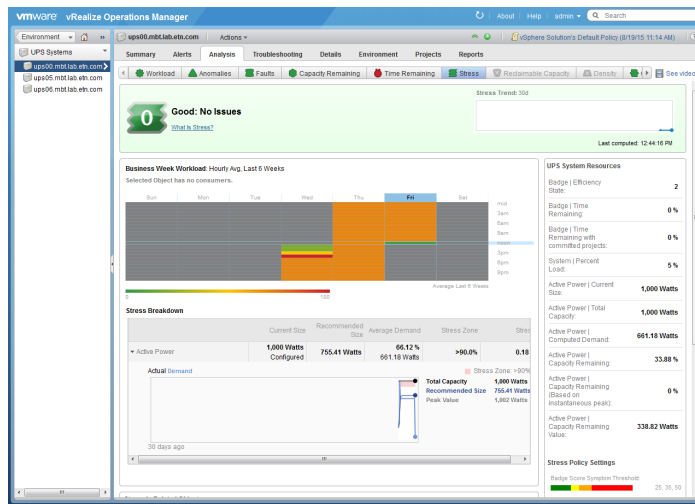
v. Time Remaining



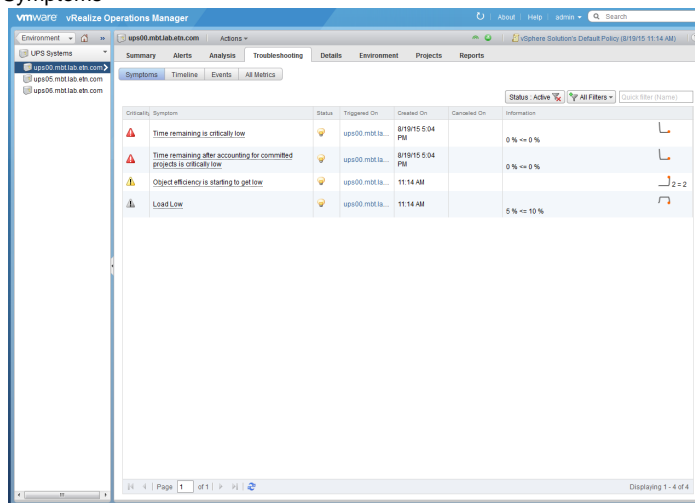


vi. Stress

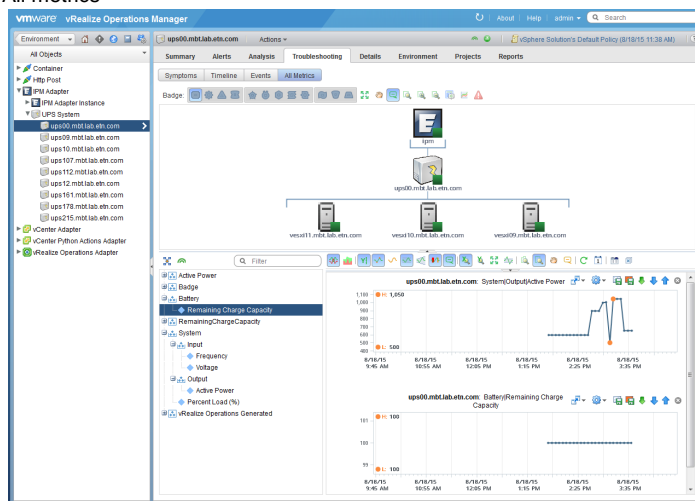




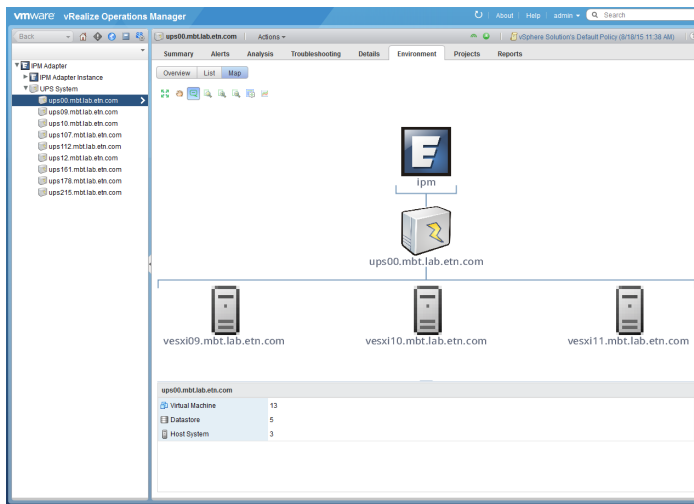
c. Troubleshooting i. Symptoms



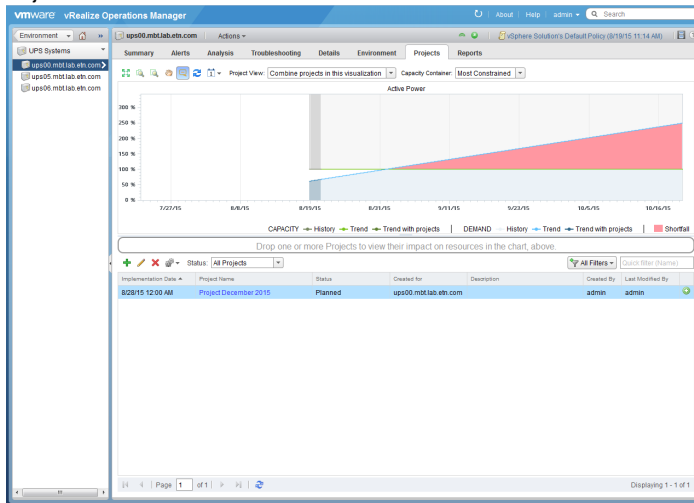
ii. All metrics



d. Details with configuration Views and Heatmaps e. Environment with the Map



f. Project



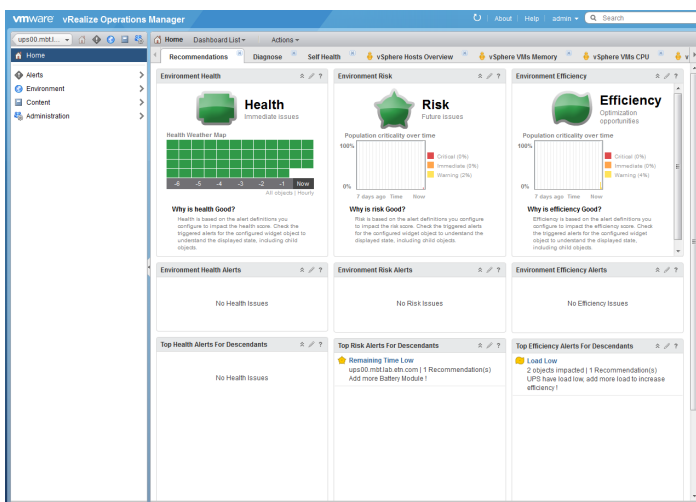
g. Reports

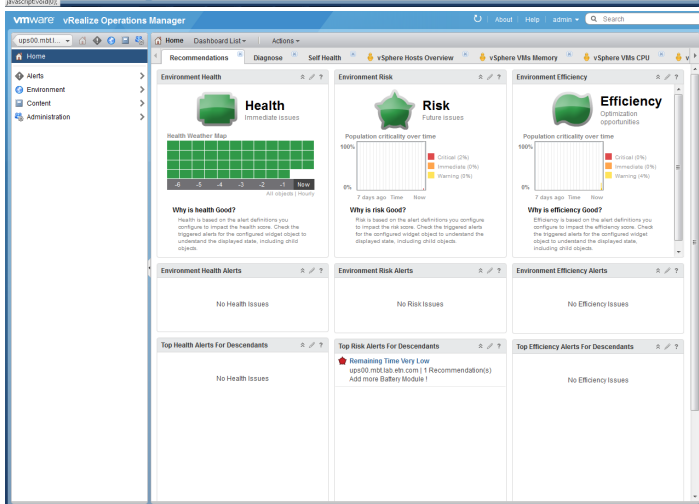
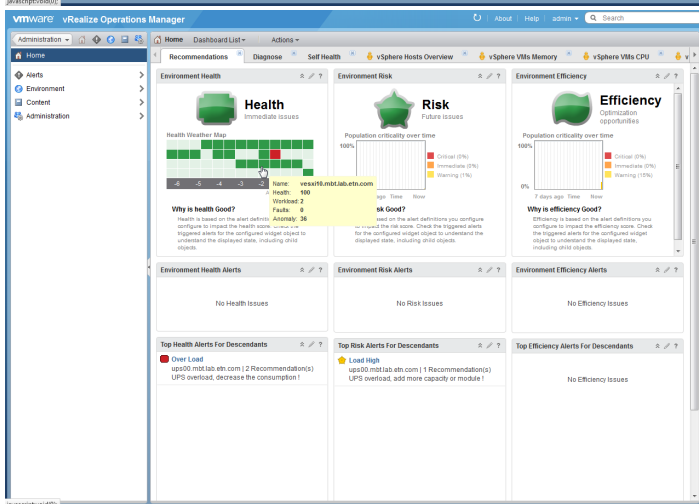
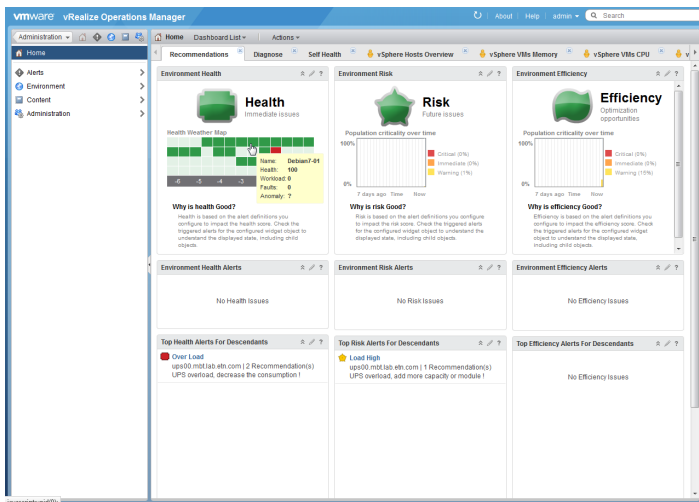
All this area is for analysis and troubleshooting.

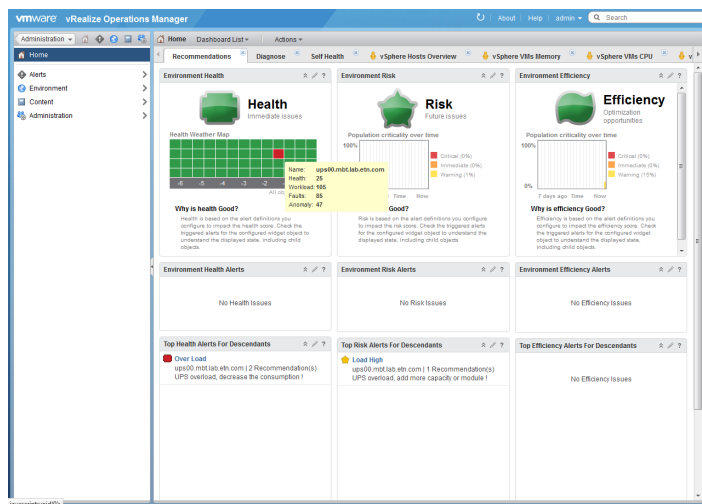
Dashboard

Home Page with the "Recommendations" dashboard with the UPS alarms and with the UPS in the grid of the Health Weather Map.

When you clic on the square you can see the relationship between the square highlighted.

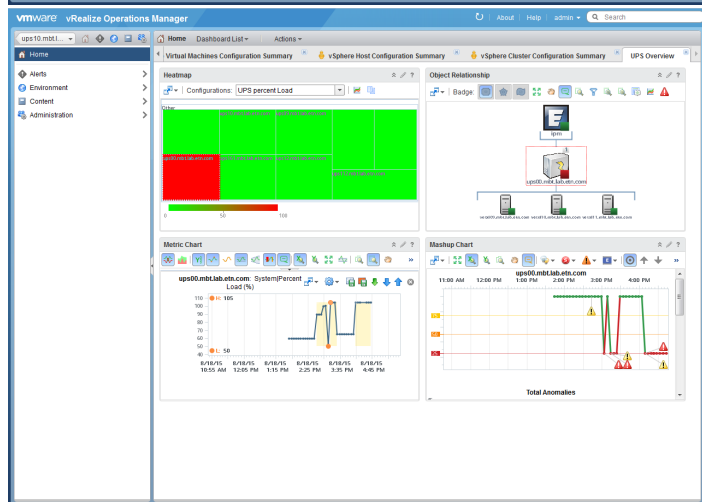
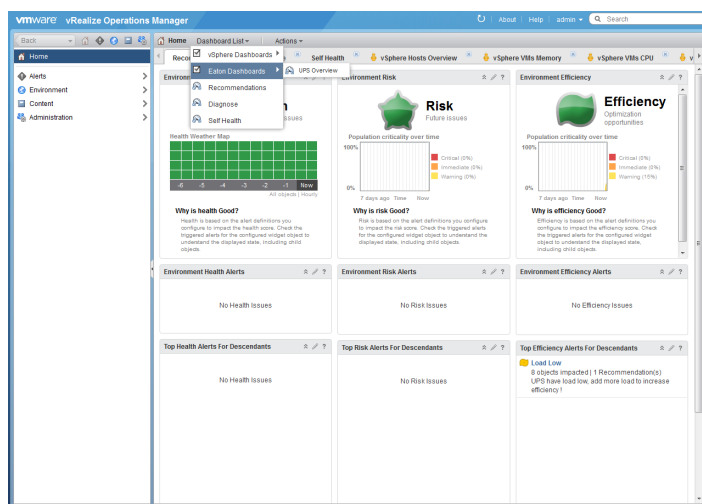






Eaton Dashboards

You can clic on "Dashboard Lists" and select UPS Overview to see the Eaton Dashboard.



Known issues

- 1) When two network interfaces are installed in the same UPS, you can't control the one exposed into this management pack.
- 2) This management pack handles the protection of servers discovered through vCenter. The protection of a standalone ESXi is not reported into

this Management Pack.

3) Virtual Power Sources are not available into this management pack.

Troubleshooting

You need to go in "Configuration" => "Support" => "Logs"

Expand the Master => Expand "Collector" and double clic on the IPMAdapter logs.

For customer, generating a support bundle will be the preferred method.