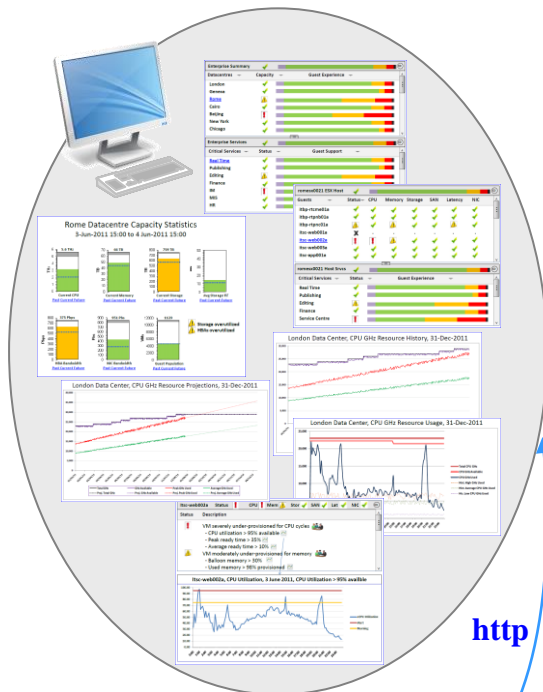# PAWZCloud

Keep Clouds from becoming storms

Virtual Infrastructure Performance/Capacity Management

PAWZCloud

Provides web-based capacity and performance management insight for large virtual infrastructures.

Resource usage, capacity status, and future projections may be viewed from the enterprise, data center, cluster, host and guest levels.

Key resource dimensions of virtual infrastructure monitored, analyzed, reported and projected include CPU, Memory, Network, SAN Storage Space, Bandwidth, and Latency.

Provides management, infrastructure and application teams with a multi-level view of guest provisioning, from the enterprise to the individual guests, configured for each team's unique requirements.

Provides provisioning status of services associated with virtual machines at a glance. If PAWZCloud detects problems with guest provisioning, it will automatically generate analysis and advice reports.

Provides a refreshingly cost-effective solution to the need for effective performance and capacity management of large virtual infrastructures.

Intranet

http

PAWZ Server

Data Center VIs

Components:

PAWZCloud Server – A central server receives data from PAWZCloud Remote Collectors, archives it into a SQL Server database, and generates web viewable interactive reports.

PAWZCloud Analyzer – Runs on the PAWZCloud Server to analyze collected data, detect current issues, project future resource usage, and provide analysis and advice interactively and via e-mail.

Agent-less Collector – Runs on any Windows server and interacts with VMware® VI to capture host performance data.
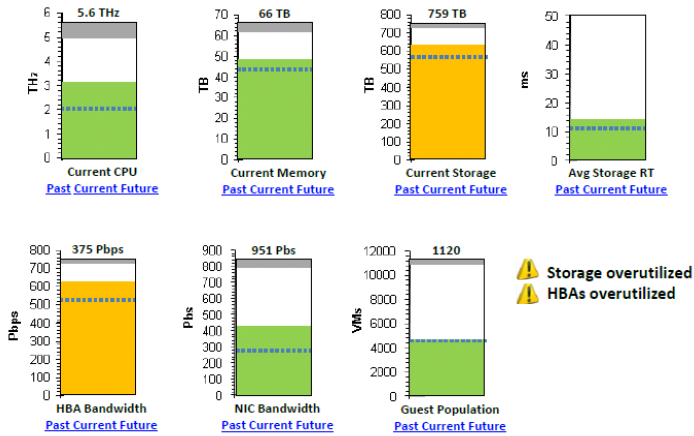
- Enterprise, data center, cluster and host views of key virtual infrastructure resources
- Multi-level view of guest and service provisioning
- Long-term resource usage projections
- Detection of under-utilized resources and protection against over-provisioned guests
- Guest provisioning problem identification, analysis, and recommendations
- Uses standard VMware® VI API for data collection
- Backed with over 20 years of performance analysis and capacity management experience

PerfCap Corporation

www.PerfCap.com; e-mail: Info@PerfCap.com; Phone: 603-594-0222

Key Reports and Features

Summary resource and guest status reports are at enterprise, datacenter, cluster, and host levels. Icons are hyper-linked to more detailed reports.
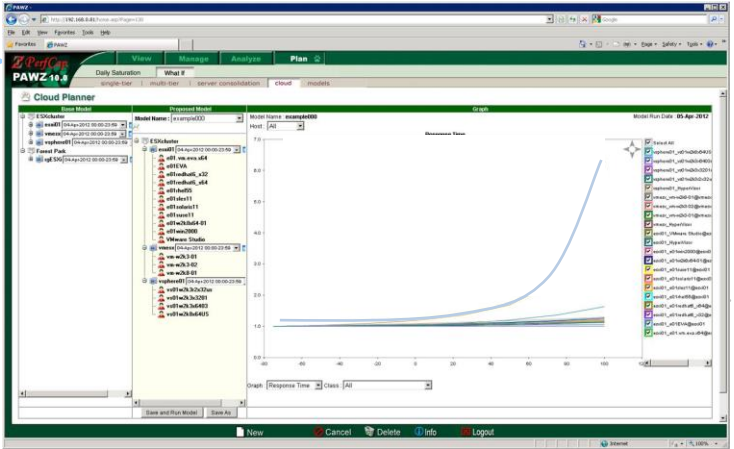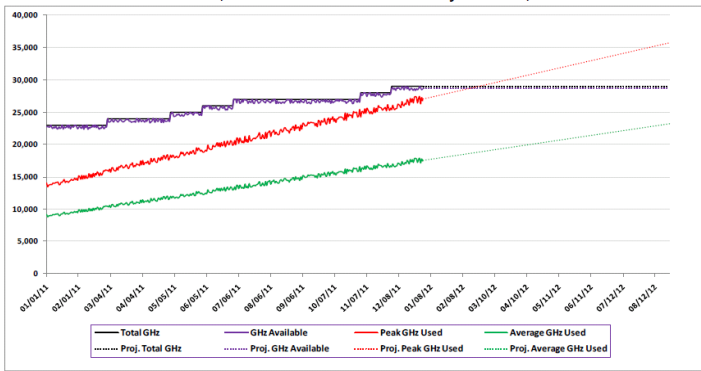

Enterprise Summary

Datacentres	Capacity	Guest Experience
London	✓	
Geneva	✓	
Rome	⚠	
Cairo	✓	
Beijing	!	
New York	✓	
Chicago	✓	

Enterprise Services

Critical Services	Status	Guest Support
Real Time	✓	
Publishing	✓	
Editing	⚠	
Finance	✓	
IM	!	
MIS	✓	
HR	✓	

Rome Datacentre Capacity Statistics
3-Jun-2011 15:00 to 4 Jun-2011 15:00

- 5.6 THz — Current CPU — Past Current Future
- 66 TB — Current Memory — Past Current Future
- 759 TB — Current Storage — Past Current Future
- Avg Storage RT — Past Current Future
- 375 Pbps — HBA Bandwidth — Past Current Future
- 951 Pbs — NIC Bandwidth — Past Current Future
- 1120 — Guest Population — Past Current Future

⚠ Storage overutilized
⚠ HBAs overutilized

At each level, summary reports for all resource dimensions with total, peak, average, and unavailable resources graphed.

Impact of moving guests using "What if" modeling
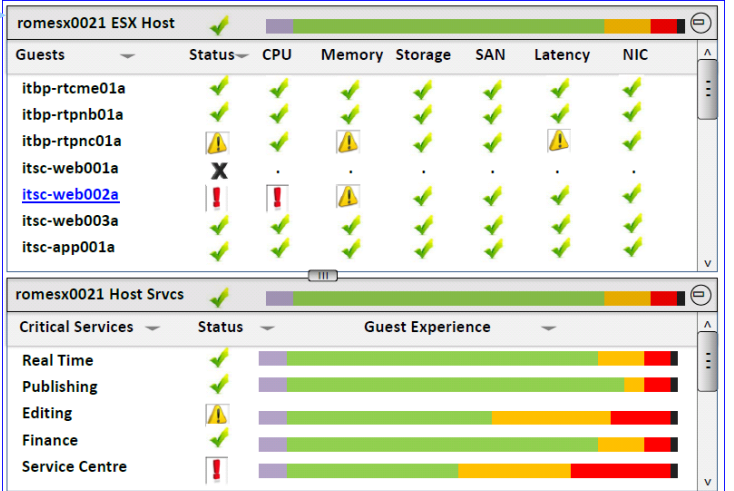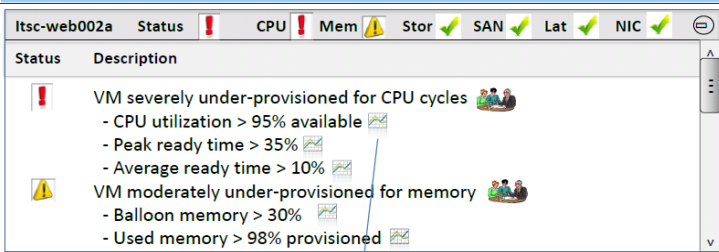
Rome Data Center, CPU GHz Resource Projections, 31-Dec-2011

Legend:
- Total GHz
- GHz Available
- Peak GHz Used
- Average GHz Used
- Proj. Total GHz
- Proj. GHz Available
- Proj. Peak GHz Used
- Proj. Average GHz Used
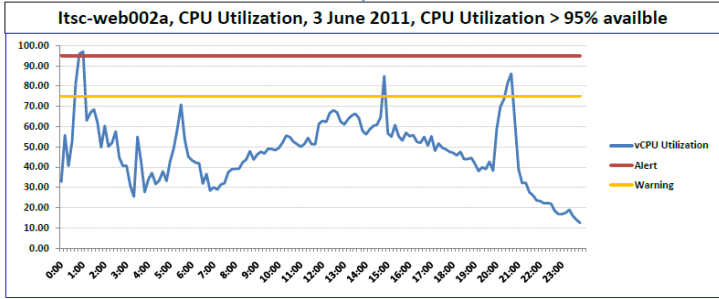

Cloud Planner

Projection of future daily average and peak resource utilizations against available resource.

Summary of host's virtual machine provisioning status with links to detailed analysis.

romesx0021 ESX Host

Guests	Status	CPU	Memory	Storage	SAN	Latency	NIC
itbp-rtcme01a	✓	✓	✓	✓	✓	✓	✓
itbp-rtpnb01a	✓	✓	✓	✓	✓	✓	✓
itbp-rtpnc01a	⚠	✓	⚠	✓	✓	⚠	✓
itsc-web001a	✗	·	·	·	·	·	·
itsc-web002a	!	!	⚠	✓	✓	✓	✓
itsc-web003a	✓	✓	✓	✓	✓	✓	✓
itsc-app001a	✓	✓	✓	✓	✓	✓	✓

romesx0021 Host Srvcs

Critical Services	Status	Guest Experience
Real Time	✓	
Publishing	✓	
Editing	⚠	
Finance	✓	
Service Centre	!	

Itsc-web002a Status ! CPU ⚠ Mem ⚠ Stor ✓ SAN ✓ Lat ✓ NIC ✓

Status	Description
!	VM severely under-provisioned for CPU cycles
	- CPU utilization > 95% available
	- Peak ready time > 35%
	- Average ready time > 10%
⚠	VM moderately under-provisioned for memory
	- Balloon memory > 30%
	- Used memory > 98% provisioned

Itsc-web002a, CPU Utilization, 3 June 2011, CPU Utilization > 95% availble

Legend:
- vCPU Utilization
- Alert
- Warning

Observed VM provisioning issues with links to evidence and recommendations.