Workload Consolidation - Software Overview

A spin-off from Italy's National Research Council (CNR)

BENEFITS

Energy saving
Power consumption reduced between 30% and 60%

Cost saving
Thanks to reduced power consumption, reduced cooling requirements, lighter administration burden

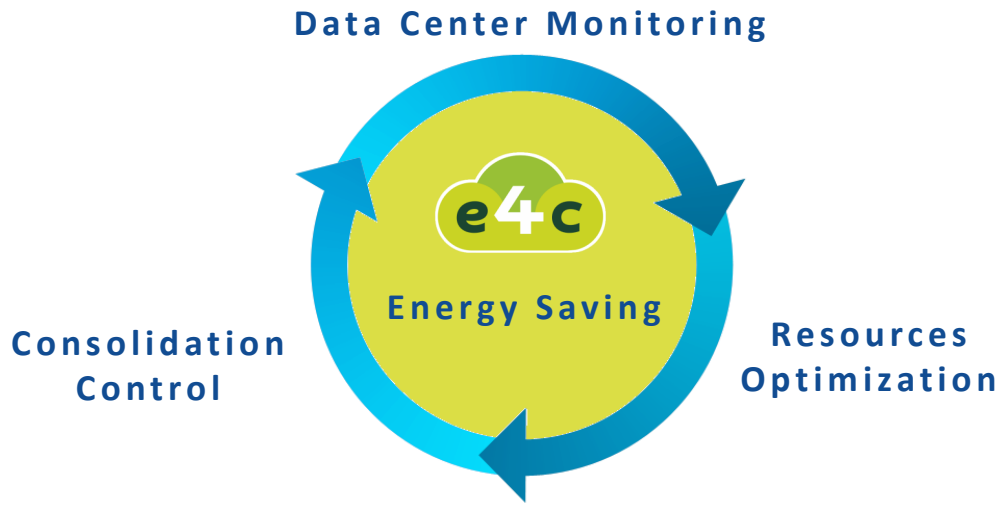
Reduced carbon footprint
Reduction between 30% and 60%, which helps to obtain Energy Savings Certificates

Resources optimization
By using servers more efficiently, a large % of resources can be released and devoted to other purposes

Advanced monitoring tool
Web-based graphical reports on utilization of servers, workload distribution, power consumption

Higher quality of service
Workload Consolidation prevents performance degradation and denial of service events

Eco4Cloud Workload Consolidation is a software platform which minimizes the energy consumption of virtualized data centers by dynamically consolidating Virtual Machines (VM) on the minimum number of physical resources.



REDUCTION OF DATA CENTER ENERGY BILL

By consolidating the maximum number of VMs on the minimum number of physical servers, the non-utilized servers can be set to hibernate, hence eliminating their respective energy consumption

CONSOLIDATION AND EFFICIENCY

The solutions/techniques commonly available today are semi-manual, extremely complex, poorly adaptive and not scalable. E4C's innovative statistical algorithm and self-organizing/adaptive consolidation process help achieve utilization figures up to 90%

CAPACITY PLANNING

Optimal occupancy of physical resources and adaptive optimization of inherently variable workloads

MEET DC SLAs – reliability, availability, performance

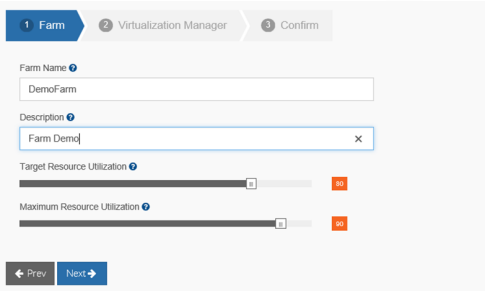
Thanks to the insights and real-time monitoring analytics of critical system parameters provided by E4C, data center Managers can proactively/predictively prevent SLA violations, mitigate risks and increase overall data center reliability

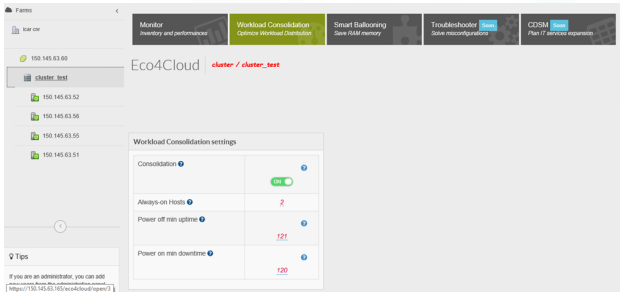
SCALABILITY

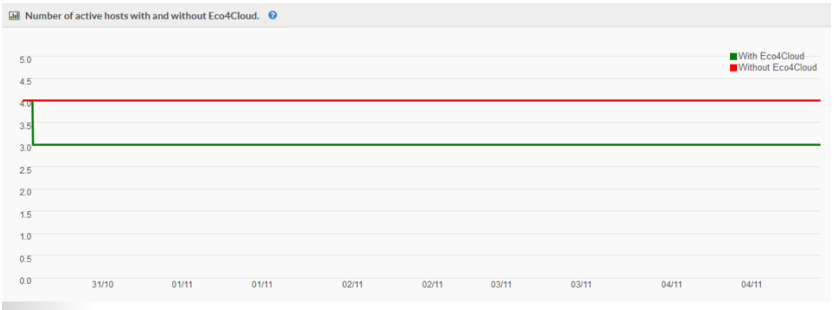
Thanks to its adaptive/self-organized distributed algorithm, E4C is very efficient for the very complex (α^n, n = number of VMs) consolidation problem, and converges to optimal state regardless of DC size in just a few hours. This is a great advantage as energy and cost savings are proportional to the data center size

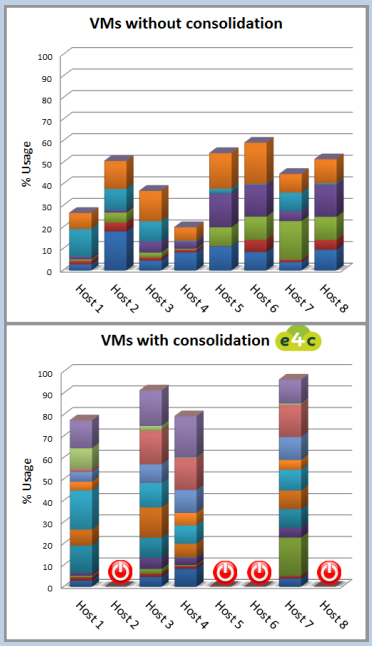
More on Workload Consolidation: http://www.eco4cloud.com/workload-consolidation

Workload Consolidation - Features









- Consolidation of max number of VMs on min number of physical servers, and dynamic adaptation based on the data center workload
- Support of most common virtualization platforms: VMWare Vsphere, Microsoft HyperV, KVM, Citrix XenServer
- Easily downloaded and installed as a virtual appliance with console access from any web browser
- Continuous monitoring of the data center to improve energy saving and prevent SLA violations
- Web-based configuration wizard and graphical reports on servers utilization, workload distribution, power consumption
- Option to define custom rules for VMs allocation and migrations, and shut-down/hibernate policies
- Operations on VMs (e.g. assignments, migrations) executed through the primitives (i.e. APIs) of the underlying virtualization platform, inheriting its security and reliability levels
- Opportunity to set and toggle between manual/semi-automatic/automatic modes at any time

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